[redacted]

EUROPEAN RESEARCH EXECUTIVE AGENCY (REA)

REA.C – Future Society
**C.4 – Reforming European R&I and Research Infrastructures**

# GRANT AGREEMENT

## Project 101131588 — FHERITALE

## PREAMBLE

This **Agreement** ('the Agreement') is **between** the following parties:

**on the one part,**

the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

**and**

**on the other part,**

1. 'the coordinator':

**CONSORZIO INTERUNIVERSITARIO RISONANZE MAGNETICHE DI METALLO PROTEINE (CIRMMP)**, PIC 999516810, established in PIAZZA DI SAN MARCO 4, FIRENZE 50121, Italy,

and the following other beneficiaries, if they sign their 'accession form' (see Annex 3 and Article 40):

2. **INSTRUCT-ERIC (INSTRUCT-ERIC)**, PIC 910086981, established in OXFORD HOUSE, PARKWAY COURT, JOHN SMITH DRIVE, OXFORD OX4 2JY, United Kingdom,

3. **AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (CSIC)**, PIC 999991722, established in CALLE SERRANO 117, MADRID 28006, Spain,

4. **AGENZIA NAZIONALE PER LE NUOVE TECNOLOGIE, L'ENERGIA E LO SVILUPPO ECONOMICO SOSTENIBILE (ENEA)**, PIC 999988521, established in LUNGOTEVERE GRANDE AMMIRAGLIO THAON DI REVEL 76, ROMA 00196, Italy,

5. **INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE PENTRU BIORESURSE ALIMENTARE (IBA)**, PIC 963496442, established in STR DINU VINTILA NR 6 SECTOR 2, BUCURESTI 021102, Romania,

6. **SCIENSANO (SCIENSANO)**, PIC 906160809, established in JULIETTE WYTSMANSTRAAT 14, ELSENE 1050, Belgium,

7. **ANALYSIS AND EXPERIMENTATION ON ECOSYSTEMS ERIC (AnaEE-ERIC)**, PIC 890060749, established in 1 AVENUE DE LA TERRASSE, GIF SUR YVETTE 91190, France,

[redacted]

8. **Masarykova univerzita (MU)**, PIC 999880657, established in Zerotinovo namesti 9, BRNO 601 77, Czechia,

9. **UNIVERSITEIT UTRECHT (UU)**, PIC 999985805, established in HEIDELBERGLAAN 8, UTRECHT 3584 CS, Netherlands,

Unless otherwise specified, references to 'beneficiary' or 'beneficiaries' include the coordinator and affiliated entities (if any).

If only one beneficiary signs the grant agreement ('mono-beneficiary grant'), all provisions referring to the 'coordinator' or the 'beneficiaries' will be considered — mutatis mutandis — as referring to the beneficiary.

The parties referred to above have agreed to enter into the Agreement.

By signing the Agreement and the accession forms, the beneficiaries accept the grant and agree to implement the action under their own responsibility and in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

The Agreement is composed of:

Preamble

Terms and Conditions (including Data Sheet)

Annex 1 Description of the action[1]

Annex 2 Estimated budget for the action

Annex 3 Accession forms (if applicable)[2]

Annex 3a Declaration on joint and several liability of affiliated entities (if applicable)[3]

Annex 4 Model for the financial statements

Annex 5 Specific rules (if applicable)

[1] Template published on Portal Reference Documents.
[2] Template published on Portal Reference Documents.
[3] Template published on Portal Reference Documents.

# TERMS AND CONDITIONS

## TABLE OF CONTENTS

# DATA SHEET

## 1. General data

Project summary:

| Project summary |
|---|
| This proposal systematically addresses the development, provision, and integration of services, across the European Research Infrastructures (RIs) landscape, that the scientific community can use to investigate the effects on health and the environment that artificial materials (including plastics, micro-, nano-, and biotechnological materials) can have. Exposure to such materials may occur as a result of their intended use (e.g., food packaging) or at the end of their lifecycle (e.g. plastic wear). These services, which are relevant to several areas of important societal and economic impact, are expected to span multiple scales and disciplines, including high-quality metrology, structural biology, microbiology, and ecotoxicology. The main output of this proposal will be a thorough overview of extant service offer by European RIs with respect to questions from state-of-the-art of scientific research in the aforementioned domains. FHERITALE will identify common strategies for the coordination and optimization of services at different RIs geared towards increasing the accessibility of relevant technologies. In parallel, it will identifty those service and technology gaps that are hampering high-impact research and preventing a timely assessment of the repercussions of new materials on health and the environment. These gaps constitute high-priority areas for future development. FHERITALE will design a coordination framework for the RIs to drive these key technological developments. The technological focus of this application includes emerging areas of research for which international interest is rapidly growing. The interdisciplinary nature of the cluster of identified technologies will connect health, food, and environment research, constituting one of the first examples of practical application of the "One Health" approach. This coordination effort will also serve as a fertile ground for further interdisciplinary research among RIs from the H&F and other domains. |

Keywords:

- RIs Cluster, nanoplastics, microplastics, technologies landscaping, servis gap analysis, OneHealth approach, Health and Food, Environment

Project number: 101131588

Project name: FOOD, HEALTH AND ENVIRONMENT RESEARCH INFRASTRUCTURES TO TACKLE EMERGING PRIORITIES

Project acronym: FHERITALE

Call: HORIZON-INFRA-2023-DEV-01

Topic: HORIZON-INFRA-2023-DEV-01-05

Type of action: HORIZON Coordination and Support Actions

Granting authority: European Research Executive Agency

Grant managed through EU Funding & Tenders Portal: Yes (eGrants)

Project starting date: fixed date: 1 January 2024

Project end date: 31 December 2026

Project duration: 36 months

Consortium agreement: Yes

## 2. Participants

**List of participants:**

| N° | Role | Short name | Legal name | Ctry | PIC | Max grant amount |
|---|---|---|---|---|---|---|
| 1 | COO | CIRMMP | CONSORZIO INTERUNIVERSITARIO RISONANZE MAGNETICHE DI METALLO PROTEINE | IT | 999516810 | 268 125.00 |
| 2 | BEN | INSTRUCT-ERIC | INSTRUCT-ERIC | UK | 910086981 | 277 762.78 |

| N° | Role | Short name | Legal name | Ctry | PIC | Max grant amount |
|---|---|---|---|---|---|---|
| 3 | BEN | CSIC | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES | 999991722 | 182 118.14 |
| 4 | BEN | ENEA | AGENZIA NAZIONALE PER LE NUOVE TECNOLOGIE, L'ENERGIA E LO SVILUPPO ECONOMICO SOSTENIBILE | IT | 999988521 | 173 308.74 |
| 5 | BEN | IBA | INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE PENTRU BIORESURSE ALIMENTARE | RO | 963496442 | 243 000.00 |
| 6 | BEN | SCIENSANO | SCIENSANO | BE | 906160809 | 142 374.99 |
| 7 | BEN | AnaEE-ERIC | ANALYSIS AND EXPERIMENTATION ON ECOSYSTEMS ERIC | FR | 890060749 | 280 500.00 |
| 8 | BEN | MU | Masarykova univerzita | CZ | 999880657 | 236 875.00 |
| 9 | BEN | UU | UNIVERSITEIT UTRECHT | NL | 999985805 | 198 125.00 |
| **Total** | | | | | | 2 002 189.65 |

**Coordinator:**

- CONSORZIO INTERUNIVERSITARIO RISONANZE MAGNETICHE DI METALLO PROTEINE (CIRMMP)

## 3. Grant

**Maximum grant amount, total estimated eligible costs and contributions and funding rate:**

| Maximum grant amount (Annex 2) | Maximum grant amount (award decision) |
|---|---|
| 2 002 189.65 | 2 002 189.65 |

**Grant form:** Lump Sum

**Grant mode:** Action grant

**Budget categories/activity types:** Lump sum contributions

**Cost eligibility options:** n/a

**Budget flexibility:** No

## 4. Reporting, payments and recoveries

### 4.1 Continuous reporting (art 21)

**Deliverables:** see Funding & Tenders Portal Continuous Reporting tool

### 4.2 Periodic reporting and payments

**Reporting and payment schedule** (art 21, 22):

| Reporting | | | | | Payments | |
|---|---|---|---|---|---|---|
| Reporting periods | | | Type | Deadline | Type | Deadline (time to pay) |
| RP No | Month from | Month to | | | | |
| | | | | | Initial prefinancing | 30 days from entry into force/10 days before starting date – whichever is the latest |
| 1 | 1 | 18 | Periodic report | 60 days after end of reporting period | Interim payment | 90 days from receiving periodic report |
| 2 | 19 | 36 | Periodic report | 60 days after end of reporting period | Final payment | 90 days from receiving periodic report |

**Prefinancing payments and guarantees:**

| Prefinancing payment | |
|---|---|
| Type | Amount |
| Prefinancing 1 (initial) | 1 601 751.74 |

**Reporting and payment modalities** (art 21, 22):

Mutual Insurance Mechanism (MIM): Yes

MIM contribution: 5% of the maximum grant amount (100 109.48), retained from the initial prefinancing

Restrictions on distribution of initial prefinancing: The prefinancing may be distributed only if the minimum number of beneficiaries set out in the call condititions (if any) have acceded to the Agreement and only to beneficiaries that have acceded.

Interim payment ceiling (if any): 90% of the maximum grant amount

No-profit rule: n/a

Late payment interest: ECB + 3.5%

Bank account for payments:

IT68F0306918488100000046003

Conversion into euros: n/a

Reporting language: Language of the Agreement

**4.3 Certificates** (art 24): n/a

**4.4 Recoveries** (art 22)

**First-line liability for recoveries:**

Beneficiary termination: Beneficiary concerned

Final payment: Each beneficiary for their own debt

[redacted]

After final payment: Beneficiary concerned

**Joint and several liability for enforced recoveries (in case of non-payment):**

Individual financial responsibility: Each beneficiary is liable only for its own debts (and those of its affiliated entities, if any)

Joint and several liability of affiliated entities — n/a

## 5. Consequences of non-compliance, applicable law & dispute settlement forum

**Suspension and termination:**

Additional suspension grounds (art 31)

Additional termination grounds (art 32)

**Applicable law** (art 43):

Standard applicable law regime: EU law + law of Belgium

**Dispute settlement forum** (art 43):

Standard dispute settlement forum:

EU beneficiaries: EU General Court + EU Court of Justice (on appeal)

Non-EU beneficiaries: Courts of Brussels, Belgium (unless an international agreement provides for the enforceability of EU court judgements)

## 6. Other

**Specific rules (Annex 5):** Yes

**Standard time-limits after project end:**

Confidentiality (for X years after final payment): 5

Record-keeping (for X years after final payment): 5 (or 3 for grants of not more than EUR 60 000)

Reviews (up to X years after final payment): 2

Audits (up to X years after final payment): 2

Extension of findings from other grants to this grant (no later than X years after final payment): 2

Impact evaluation (up to X years after final payment): 5 (or 3 for grants of not more than EUR 60 000)

[redacted]

## CHAPTER 1 GENERAL

### ARTICLE 1 — SUBJECT OF THE AGREEMENT

This Agreement sets out the rights and obligations and terms and conditions applicable to the grant awarded for the implementation of the action set out in Chapter 2.

### ARTICLE 2 — DEFINITIONS

For the purpose of this Agreement, the following definitions apply:

Actions — The project which is being funded in the context of this Agreement.

Grant — The grant awarded in the context of this Agreement.

EU grants — Grants awarded by EU institutions, bodies, offices or agencies (including EU executive agencies, EU regulatory agencies, EDA, joint undertakings, etc.).

Participants — Entities participating in the action as beneficiaries, affiliated entities, associated partners, third parties giving in-kind contributions, subcontractors or recipients of financial support to third parties.

Beneficiaries (BEN) — The signatories of this Agreement (either directly or through an accession form).

Affiliated entities (AE) — Entities affiliated to a beneficiary within the meaning of Article 187 of EU Financial Regulation 2018/1046[4] which participate in the action with similar rights and obligations as the beneficiaries (obligation to implement action tasks and right to charge costs and claim contributions).

Associated partners (AP) — Entities which participate in the action, but without the right to charge costs or claim contributions.

Purchases — Contracts for goods, works or services needed to carry out the action (e.g. equipment, consumables and supplies) but which are not part of the action tasks (see Annex 1).

Subcontracting — Contracts for goods, works or services that are part of the action tasks (see Annex 1).

In-kind contributions — In-kind contributions within the meaning of Article 2(36) of EU Financial

[4] For the definition, see Article 187 Regulation (EU, Euratom) 2018/1046 of the European Parliament and of the Council of 18 July 2018 on the financial rules applicable to the general budget of the Union, amending Regulations (EU) No 1296/2013, (EU) No 1301/2013, (EU) No 1303/2013, (EU) No 1304/2013, (EU) No 1309/2013, (EU) No 1316/2013, (EU) No 223/2014, (EU) No 283/2014, and Decision No 541/2014/EU and repealing Regulation (EU, Euratom) No 966/2012 ('EU Financial Regulation') (OJ L 193, 30.7.2018, p. 1): "**affiliated entities** [are]:
(a) entities that form a sole beneficiary [(i.e. where an entity is formed of several entities that satisfy the criteria for being awarded a grant, including where the entity is specifically established for the purpose of implementing an action to be financed by a grant)];
(b) entities that satisfy the eligibility criteria and that do not fall within one of the situations referred to in Article 136(1) and 141(1) and that have a link with the beneficiary, in particular a legal or capital link, which is neither limited to the action nor established for the sole purpose of its implementation".

Regulation 2018/1046, i.e. non-financial resources made available free of charge by third parties.

Fraud — Fraud within the meaning of Article 3 of EU Directive 2017/1371[5] and Article 1 of the Convention on the protection of the European Communities' financial interests, drawn up by the Council Act of 26 July 1995[6], as well as any other wrongful or criminal deception intended to result in financial or personal gain.

Irregularities — Any type of breach (regulatory or contractual) which could impact the EU financial interests, including irregularities within the meaning of Article 1(2) of EU Regulation 2988/95[7].

Grave professional misconduct — Any type of unacceptable or improper behaviour in exercising one's profession, especially by employees, including grave professional misconduct within the meaning of Article 136(1)(c) of EU Financial Regulation 2018/1046.

Applicable EU, international and national law — Any legal acts or other (binding or non-binding) rules and guidance in the area concerned.

Portal — EU Funding & Tenders Portal; electronic portal and exchange system managed by the European Commission and used by itself and other EU institutions, bodies, offices or agencies for the management of their funding programmes (grants, procurements, prizes, etc.).

## CHAPTER 2 ACTION

### ARTICLE 3 — ACTION

The grant is awarded for the action **101131588 — FHERITALE** ('action'), as described in Annex 1.

### ARTICLE 4 — DURATION AND STARTING DATE

The duration and the starting date of the action are set out in the Data Sheet (see Point 1).

## CHAPTER 3 GRANT

### ARTICLE 5 — GRANT

#### 5.1 Form of grant

[5] Directive (EU) 2017/1371 of the European Parliament and of the Council of 5 July 2017 on the fight against fraud to the Union's financial interests by means of criminal law (OJ L 198, 28.7.2017, p. 29).

[6] OJ C 316, 27.11.1995, p. 48.

[7] Council Regulation (EC, Euratom) No 2988/95 of 18 December 1995 on the protection of the European Communities financial interests (OJ L 312, 23.12.1995, p. 1).

The grant is an action grant[8] which takes the form of a lump sum grant for the completion of work packages.

### 5.2 Maximum grant amount

The maximum grant amount is set out in the Data Sheet (see Point 3) and in the estimated budget (Annex 2).

### 5.3 Funding rate

Not applicable

### 5.4 Estimated budget, budget categories and forms of funding

The estimated budget for the action (lump sum breakdown) is set out in Annex 2.

It contains the estimated eligible contributions for the action (lump sum contributions), broken down by participant and work package.

Annex 2 also shows the types of contributions (forms of funding)[9] to be used for each work package.

### 5.5 Budget flexibility

Budget flexibility does not apply; changes to the estimated budget (lump sum breakdown) always require an amendment (see Article 39).

Amendments for transfers between *work packages* are moreover possible only if:

- the work packages concerned are not already completed (and declared in a financial statement) and
- the transfers are justified by the technical implementation of the action.

## ARTICLE 6 — ELIGIBLE AND INELIGIBLE CONTRIBUTIONS

### 6.1 and 6.2 General and specific eligibility conditions

Lump sum contributions are eligible ('eligible contributions'), if:

(a) they are set out in Annex 2 and

(b) the work packages are completed and the work is properly implemented by the beneficiaries and/or the results are achieved, in accordance with Annex 1 and during in the period set out in Article 4 (with the exception of work/results relating to the submission of the final periodic report, which may be achieved afterwards; see Article 21)

They will be calculated on the basis of the amounts set out in Annex 2.

[8] For the definition, see Article 180(2)(a) EU Financial Regulation 2018/1046: '**action grant**' means an EU grant to finance "an action intended to help achieve a Union policy objective".

[9] See Article 125 EU Financial Regulation 2018/1046.

[redacted]

### 6.3 Ineligible contributions

'Ineligible contributions' are:

(a) lump sum contributions that do not comply with the conditions set out above (see Article 6.1 and 6.2)

(b) lump sum contributions for activities already funded under other EU grants (or grants awarded by an EU Member State, non-EU country or other body implementing the EU budget), except for the following case:

(i) Synergy actions: not applicable

(c) other:

(i) country restrictions for eligible costs: not applicable.

### 6.4 Consequences of non-compliance

If a beneficiary declares lump sum contributions that are ineligible, they will be rejected (see Article 27).

This may also lead to other measures described in Chapter 5.

## CHAPTER 4 GRANT IMPLEMENTATION

## SECTION 1 CONSORTIUM: BENEFICIARIES, AFFILIATED ENTITIES AND OTHER PARTICIPANTS

### ARTICLE 7 — BENEFICIARIES

The beneficiaries, as signatories of the Agreement, are fully responsible towards the granting authority for implementing it and for complying with all its obligations.

They must implement the Agreement to their best abilities, in good faith and in accordance with all the obligations and terms and conditions it sets out.

They must have the appropriate resources to implement the action and implement the action under their own responsibility and in accordance with Article 11. If they rely on affiliated entities or other participants (see Articles 8 and 9), they retain sole responsibility towards the granting authority and the other beneficiaries.

They are jointly responsible for the *technical* implementation of the action. If one of the beneficiaries fails to implement their part of the action, the other beneficiaries must ensure that this part is implemented by someone else (without being entitled to an increase of the maximum grant amount and subject to an amendment; see Article 39). The *financial* responsibility of each beneficiary in case of recoveries is governed by Article 22.

The beneficiaries (and their action) must remain eligible under the EU programme funding the grant

for the entire duration of the action. Lump sum contributions will be eligible only as long as the beneficiary and the action are eligible.

The **internal roles and responsibilities** of the beneficiaries are divided as follows:

(a) Each beneficiary must:

(i) keep information stored in the Portal Participant Register up to date (see Article 19)

(ii) inform the granting authority (and the other beneficiaries) immediately of any events or circumstances likely to affect significantly or delay the implementation of the action (see Article 19)

(iii) submit to the coordinator in good time:

- the prefinancing guarantees (if required; see Article 23)
- the financial statements and certificates on the financial statements (CFS): not applicable
- the contribution to the deliverables and technical reports (see Article 21)
- any other documents or information required by the granting authority under the Agreement

(iv) submit via the Portal data and information related to the participation of their affiliated entities.

(b) The coordinator must:

(i) monitor that the action is implemented properly (see Article 11)

(ii) act as the intermediary for all communications between the consortium and the granting authority, unless the Agreement or granting authority specifies otherwise, and in particular:

- submit the prefinancing guarantees to the granting authority (if any)
- request and review any documents or information required and verify their quality and completeness before passing them on to the granting authority
- submit the deliverables and reports to the granting authority
- inform the granting authority about the payments made to the other beneficiaries (report on the distribution of payments; if required, see Articles 22 and 32)

(iii) distribute the payments received from the granting authority to the other beneficiaries without unjustified delay (see Article 22).

The coordinator may not delegate or subcontract the above-mentioned tasks to any other beneficiary or third party (including affiliated entities).

However, coordinators which are public bodies may delegate the tasks set out in Point (b)(ii) last

indent and (iii) above to entities with 'authorisation to administer' which they have created or which are controlled by or affiliated to them. In this case, the coordinator retains sole responsibility for the payments and for compliance with the obligations under the Agreement.

Moreover, coordinators which are 'sole beneficiaries'[10] (or similar, such as European research infrastructure consortia (ERICs)) may delegate the tasks set out in Point (b)(i) to (iii) above to one of their members. The coordinator retains sole responsibility for compliance with the obligations under the Agreement.

The beneficiaries must have **internal arrangements** regarding their operation and co-ordination, to ensure that the action is implemented properly.

If required by the granting authority (see Data Sheet, Point 1), these arrangements must be set out in a written **consortium agreement** between the beneficiaries, covering for instance:

- the internal organisation of the consortium
- the management of access to the Portal
- different distribution keys for the payments and financial responsibilities in case of recoveries (if any)
- additional rules on rights and obligations related to background and results (see Article 16)
- settlement of internal disputes
- liability, indemnification and confidentiality arrangements between the beneficiaries.

The internal arrangements must not contain any provision contrary to this Agreement.

## ARTICLE 8 — AFFILIATED ENTITIES

Not applicable

## ARTICLE 9 — OTHER PARTICIPANTS INVOLVED IN THE ACTION

### 9.1 Associated partners

Not applicable

### 9.2 Third parties giving in-kind contributions to the action

Other third parties may give in-kind contributions to the action (i.e. personnel, equipment, other goods, works and services, etc. which are free-of-charge) if necessary for the implementation.

Third parties giving in-kind contributions do not implement any action tasks. They may not charge contributions to the action (no lump sum contributions) and their costs are considered entirely covered by the lump sum contributions paid to the beneficiaries.

[10] For the definition, see Article 187(2) EU Financial Regulation 2018/1046: "Where several entities satisfy the criteria for being awarded a grant and together form one entity, that entity may be treated as the **sole beneficiary**, including where it is specifically established for the purpose of implementing the action financed by the grant."

The third parties and their in-kind contributions should be set out in Annex 1.

### 9.3 Subcontractors

Subcontractors may participate in the action, if necessary for the implementation.

Subcontractors must implement their action tasks in accordance with Article 11. The beneficiaries' costs for subcontracting are considered entirely covered by the lump sum contributions for implementing the work packages (irrespective of the actual subcontracting costs incurred, if any).

The beneficiaries must ensure that their contractual obligations under Articles 11 (proper implementation), 12 (conflict of interest), 13 (confidentiality and security), 14 (ethics), 17.2 (visibility), 18 (specific rules for carrying out action), 19 (information) and 20 (record-keeping) also apply to the subcontractors.

The beneficiaries must ensure that the bodies mentioned in Article 25 (e.g. granting authority, OLAF, Court of Auditors (ECA), etc.) can exercise their rights also towards the subcontractors.

### 9.4 Recipients of financial support to third parties

If the action includes providing financial support to third parties (e.g. grants, prizes or similar forms of support), the beneficiaries must ensure that their contractual obligations under Articles 12 (conflict of interest), 13 (confidentiality and security), 14 (ethics), 17.2 (visibility), 18 (specific rules for carrying out action), 19 (information) and 20 (record-keeping)also apply to the third parties receiving the support (recipients).

The beneficiaries must also ensure that the bodies mentioned in Article 25 (e.g. granting authority, OLAF, Court of Auditors (ECA), etc.) can exercise their rights also towards the recipients.

## ARTICLE 10 — PARTICIPANTS WITH SPECIAL STATUS

### 10.1 Non-EU participants

Participants which are established in a non-EU country (if any) undertake to comply with their obligations under the Agreement and:

- to respect general principles (including fundamental rights, values and ethical principles, environmental and labour standards, rules on classified information, intellectual property rights, visibility of funding and protection of personal data)
- for the submission of certificates under Article 24: use qualified external auditors which are independent and comply with comparable standards as those set out in EU Directive 2006/43/EC[11]
- for the controls under Article 25: allow for checks, reviews, audits and investigations (including on-the-spot checks, visits and inspections) by the bodies mentioned in that Article (e.g. granting authority, OLAF, Court of Auditors (ECA), etc.).

[11] Directive 2006/43/EC of the European Parliament and of the Council of 17 May 2006 on statutory audits of annual accounts and consolidated accounts or similar national regulations (OJ L 157, 9.6.2006, p. 87).

[redacted]

Special rules on dispute settlement apply (see Data Sheet, Point 5).

### 10.2 Participants which are international organisations

Participants which are international organisations (IOs; if any) undertake to comply with their obligations under the Agreement and:

- to respect general principles (including fundamental rights, values and ethical principles, environmental and labour standards, rules on classified information, intellectual property rights, visibility of funding and protection of personal data)

- for the submission of certificates under Article 24: to use either independent public officers or external auditors which comply with comparable standards as those set out in EU Directive 2006/43/EC

- for the controls under Article 25: to allow for the checks, reviews, audits and investigations by the bodies mentioned in that Article, taking into account the specific agreements concluded by them and the EU (if any).

For such participants, nothing in the Agreement will be interpreted as a waiver of their privileges or immunities, as accorded by their constituent documents or international law.

Special rules on applicable law and dispute settlement apply (see Article 43 and Data Sheet, Point 5).

### 10.3 Pillar-assessed participants

Pillar-assessed participants (if any) may rely on their own systems, rules and procedures, in so far as they have been positively assessed and do not call into question the decision awarding the grant or breach the principle of equal treatment of applicants or beneficiaries.

'Pillar-assessment' means a review by the European Commission on the systems, rules and procedures which participants use for managing EU grants (in particular internal control system, accounting system, external audits, financing of third parties, rules on recovery and exclusion, information on recipients and protection of personal data; see Article 154 EU Financial Regulation 2018/1046).

Participants with a positive pillar assessment may rely on their own systems, rules and procedures, in particular for:

- record-keeping (Article 20): may be done in accordance with internal standards, rules and procedures

- currency conversion for financial statements (Article 21): may be done in accordance with usual accounting practices

- guarantees (Article 23): for public law bodies, prefinancing guarantees are not needed

- certificates (Article 24):

    - certificates on the financial statements (CFS): may be provided by their regular internal or external auditors and in accordance with their internal financial regulations and procedures

[redacted]

- certificates on usual accounting practices (CoMUC): are not needed if those practices are covered by an ex-ante assessment

and use the following specific rules, for:

- recoveries (Article 22): in case of financial support to third parties, there will be no recovery if the participant has done everything possible to retrieve the undue amounts from the third party receiving the support (including legal proceedings) and non-recovery is not due to an error or negligence on its part

- checks, reviews, audits and investigations by the EU (Article 25): will be conducted taking into account the rules and procedures specifically agreed between them and the framework agreement (if any)

- impact evaluation (Article 26): will be conducted in accordance with the participant's internal rules and procedures and the framework agreement (if any)

- grant agreement suspension (Article 31): certain costs incurred during grant suspension are eligible (notably, minimum costs necessary for a possible resumption of the action and costs relating to contracts which were entered into before the pre-information letter was received and which could not reasonably be suspended, reallocated or terminated on legal grounds)

- grant agreement termination (Article 32): the final grant amount and final payment will be calculated taking into account also costs relating to contracts due for execution only after termination takes effect, if the contract was entered into before the pre-information letter was received and could not reasonably be terminated on legal grounds

- liability for damages (Article 33.2): the granting authority must be compensated for damage it sustains as a result of the implementation of the action or because the action was not implemented in full compliance with the Agreement only if the damage is due to an infringement of the participant's internal rules and procedures or due to a violation of third parties' rights by the participant or one of its employees or individual for whom the employees are responsible.

Participants whose pillar assessment covers procurement and granting procedures may also do purchases, subcontracting and financial support to third parties (Article 6.2) in accordance with their internal rules and procedures for purchases, subcontracting and financial support.

Participants whose pillar assessment covers data protection rules may rely on their internal standards, rules and procedures for data protection (Article 15).

The participants may however not rely on provisions which would breach the principle of equal treatment of applicants or beneficiaries or call into question the decision awarding the grant, such as in particular:

- eligibility (Article 6)

- consortium roles and set-up (Articles 7-9)

- security and ethics (Articles 13, 14)

- IPR (including background and results, access rights and rights of use), communication, dissemination and visibility (Articles 16 and 17)
- information obligation (Article 19)
- payment, reporting and amendments (Articles 21, 22 and 39)
- rejections, reductions, suspensions and terminations (Articles 27, 28, 29-32)

If the pillar assessment was subject to remedial measures, reliance on the internal systems, rules and procedures is subject to compliance with those remedial measures.

Participants whose assessment has not yet been updated to cover (the new rules on) data protection may rely on their internal systems, rules and procedures, provided that they ensure that personal data is:

- processed lawfully, fairly and in a transparent manner in relation to the data subject
- collected for specified, explicit and legitimate purposes and not further processed in a manner that is incompatible with those purposes
- adequate, relevant and limited to what is necessary in relation to the purposes for which they are processed
- accurate and, where necessary, kept up to date
- kept in a form which permits identification of data subjects for no longer than is necessary for the purposes for which the data is processed and
- processed in a manner that ensures appropriate security of the personal data.

Participants must inform the coordinator without delay of any changes to the systems, rules and procedures that were part of the pillar assessment. The coordinator must immediately inform the granting authority.

Pillar-assessed participants that have also concluded a framework agreement with the EU, may moreover — under the same conditions as those above (i.e. not call into question the decision awarding the grant or breach the principle of equal treatment of applicants or beneficiaries) — rely on provisions set out in that framework agreement.

## SECTION 2 RULES FOR CARRYING OUT THE ACTION

### ARTICLE 11 — PROPER IMPLEMENTATION OF THE ACTION

#### 11.1 Obligation to properly implement the action

The beneficiaries must implement the action as described in Annex 1 and in compliance with the provisions of the Agreement, the call conditions and all legal obligations under applicable EU, international and national law.

#### 11.2 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 28).

Such breaches may also lead to other measures described in Chapter 5.

## ARTICLE 12 — CONFLICT OF INTERESTS

### 12.1 Conflict of interests

The beneficiaries must take all measures to prevent any situation where the impartial and objective implementation of the Agreement could be compromised for reasons involving family, emotional life, political or national affinity, economic interest or any other direct or indirect interest ('conflict of interests').

They must formally notify the granting authority without delay of any situation constituting or likely to lead to a conflict of interests and immediately take all the necessary steps to rectify this situation.

The granting authority may verify that the measures taken are appropriate and may require additional measures to be taken by a specified deadline.

### 12.2 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 28) and the grant or the beneficiary may be terminated (see Article 32).

Such breaches may also lead to other measures described in Chapter 5.

## ARTICLE 13 — CONFIDENTIALITY AND SECURITY

### 13.1 Sensitive information

The parties must keep confidential any data, documents or other material (in any form) that is identified as sensitive in writing ('sensitive information') — during the implementation of the action and for at least until the time-limit set out in the Data Sheet (see Point 6).

If a beneficiary requests, the granting authority may agree to keep such information confidential for a longer period.

Unless otherwise agreed between the parties, they may use sensitive information only to implement the Agreement.

The beneficiaries may disclose sensitive information to their personnel or other participants involved in the action only if they:

(a) need to know it in order to implement the Agreement and

(b) are bound by an obligation of confidentiality.

The granting authority may disclose sensitive information to its staff and to other EU institutions and bodies.

It may moreover disclose sensitive information to third parties, if:

[redacted]

(a) this is necessary to implement the Agreement or safeguard the EU financial interests and

(b) the recipients of the information are bound by an obligation of confidentiality.

The confidentiality obligations no longer apply if:

(a) the disclosing party agrees to release the other party

(b) the information becomes publicly available, without breaching any confidentiality obligation

(c) the disclosure of the sensitive information is required by EU, international or national law.

Specific confidentiality rules (if any) are set out in Annex 5.

### 13.2 Classified information

The parties must handle classified information in accordance with the applicable EU, international or national law on classified information (in particular, Decision 2015/444[12] and its implementing rules).

Deliverables which contain classified information must be submitted according to special procedures agreed with the granting authority.

Action tasks involving classified information may be subcontracted only after explicit approval (in writing) from the granting authority.

Classified information may not be disclosed to any third party (including participants involved in the action implementation) without prior explicit written approval from the granting authority.

Specific security rules (if any) are set out in Annex 5.

### 13.3 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 28).

Such breaches may also lead to other measures described in Chapter 5.

## ARTICLE 14 — ETHICS AND VALUES

### 14.1 Ethics

The action must be carried out in line with the highest ethical standards and the applicable EU, international and national law on ethical principles.

Specific ethics rules (if any) are set out in Annex 5.

### 14.2 Values

The beneficiaries must commit to and ensure the respect of basic EU values (such as respect for

[12] Commission Decision 2015/444/EC, Euratom of 13 March 2015 on the security rules for protecting EU classified information (OJ L 72, 17.3.2015, p. 53).

human dignity, freedom, democracy, equality, the rule of law and human rights, including the rights of minorities).

Specific rules on values (if any) are set out in Annex 5.

### 14.3 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 28).

Such breaches may also lead to other measures described in Chapter 5.

## ARTICLE 15 — DATA PROTECTION

### 15.1 Data processing by the granting authority

Any personal data under the Agreement will be processed under the responsibility of the data controller of the granting authority in accordance with and for the purposes set out in the Portal Privacy Statement.

For grants where the granting authority is the European Commission, an EU regulatory or executive agency, joint undertaking or other EU body, the processing will be subject to Regulation 2018/1725[13].

### 15.2 Data processing by the beneficiaries

The beneficiaries must process personal data under the Agreement in compliance with the applicable EU, international and national law on data protection (in particular, Regulation 2016/679[14]).

They must ensure that personal data is:

- processed lawfully, fairly and in a transparent manner in relation to the data subjects
- collected for specified, explicit and legitimate purposes and not further processed in a manner that is incompatible with those purposes
- adequate, relevant and limited to what is necessary in relation to the purposes for which they are processed
- accurate and, where necessary, kept up to date
- kept in a form which permits identification of data subjects for no longer than is necessary for the purposes for which the data is processed and
- processed in a manner that ensures appropriate security of the data.

[13] Regulation (EU) 2018/1725 of the European Parliament and of the Council of 23 October 2018 on the protection of natural persons with regard to the processing of personal data by the Union institutions, bodies, offices and agencies and on the free movement of such data, and repealing Regulation (EC) No 45/2001 and Decision No 1247/2002/EC (OJ L 295, 21.11.2018, p. 39).

[14] Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC ('GDPR') (OJ L 119, 4.5.2016, p. 1).

The beneficiaries may grant their personnel access to personal data only if it is strictly necessary for implementing, managing and monitoring the Agreement. The beneficiaries must ensure that the personnel is under a confidentiality obligation.

The beneficiaries must inform the persons whose data are transferred to the granting authority and provide them with the Portal Privacy Statement.

### 15.3 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 28).

Such breaches may also lead to other measures described in Chapter 5.

## ARTICLE 16 — INTELLECTUAL PROPERTY RIGHTS (IPR) — BACKGROUND AND RESULTS —ACCESS RIGHTS AND RIGHTS OF USE

### 16.1 Background and access rights to background

The beneficiaries must give each other and the other participants access to the background identified as needed for implementing the action, subject to any specific rules in Annex 5.

'Background' means any data, know-how or information — whatever its form or nature (tangible or intangible), including any rights such as intellectual property rights — that is:

(a) held by the beneficiaries before they acceded to the Agreement and

(b) needed to implement the action or exploit the results.

If background is subject to rights of a third party, the beneficiary concerned must ensure that it is able to comply with its obligations under the Agreement.

### 16.2 Ownership of results

The granting authority does not obtain ownership of the results produced under the action.

'Results' means any tangible or intangible effect of the action, such as data, know-how or information, whatever its form or nature, whether or not it can be protected, as well as any rights attached to it, including intellectual property rights.

### 16.3 Rights of use of the granting authority on materials, documents and information received for policy, information, communication, dissemination and publicity purposes

The granting authority has the right to use non-sensitive information relating to the action and materials and documents received from the beneficiaries (notably summaries for publication, deliverables, as well as any other material, such as pictures or audio-visual material, in paper or electronic form) for policy information, communication, dissemination and publicity purposes — during the action or afterwards.

The right to use the beneficiaries' materials, documents and information is granted in the form of a royalty-free, non-exclusive and irrevocable licence, which includes the following rights:

(a) **use for its own purposes** (in particular, making them available to persons working for the granting authority or any other EU service (including institutions, bodies, offices, agencies, etc.) or EU Member State institution or body; copying or reproducing them in whole or in part, in unlimited numbers; and communication through press information services)

(b) **distribution to the public** (in particular, publication as hard copies and in electronic or digital format, publication on the internet, as a downloadable or non-downloadable file, broadcasting by any channel, public display or presentation, communicating through press information services, or inclusion in widely accessible databases or indexes)

(c) **editing or redrafting** (including shortening, summarising, inserting other elements (e.g. meta-data, legends, other graphic, visual, audio or text elements), extracting parts (e.g. audio or video files), dividing into parts, use in a compilation)

(d) **translation**

(e) **storage** in paper, electronic or other form

(f) **archiving**, in line with applicable document-management rules

(g) the right to authorise **third parties** to act on its behalf or sub-license to third parties the modes of use set out in Points (b), (c), (d) and (f), if needed for the information, communication and publicity activity of the granting authority and

(h) **processing**, analysing, aggregating the materials, documents and information received and **producing derivative works**.

The rights of use are granted for the whole duration of the industrial or intellectual property rights concerned.

If materials or documents are subject to moral rights or third party rights (including intellectual property rights or rights of natural persons on their image and voice), the beneficiaries must ensure that they comply with their obligations under this Agreement (in particular, by obtaining the necessary licences and authorisations from the rights holders concerned).

Where applicable, the granting authority will insert the following information:

"© – [year] – [name of the copyright owner]. All rights reserved. Licensed to the [name of granting authority] under conditions."

### 16.4 Specific rules on IPR, results and background

Specific rules regarding intellectual property rights, results and background (if any) are set out in Annex 5.

### 16.5 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 28).

Such a breach may also lead to other measures described in Chapter 5.

[redacted]

## ARTICLE 17 — COMMUNICATION, DISSEMINATION AND VISIBILITY

### 17.1 Communication — Dissemination — Promoting the action

Unless otherwise agreed with the granting authority, the beneficiaries must promote the action and its results by providing targeted information to multiple audiences (including the media and the public), in accordance with Annex 1 and in a strategic, coherent and effective manner.

Before engaging in a communication or dissemination activity expected to have a major media impact, the beneficiaries must inform the granting authority.

### 17.2 Visibility — European flag and funding statement

Unless otherwise agreed with the granting authority, communication activities of the beneficiaries related to the action (including media relations, conferences, seminars, information material, such as brochures, leaflets, posters, presentations, etc., in electronic form, via traditional or social media, etc.), dissemination activities and any infrastructure, equipment, vehicles, supplies or major result funded by the grant must acknowledge the EU support and display the European flag (emblem) and funding statement (translated into local languages, where appropriate):

Funded by the
European Union

Co-funded by the
European Union

Funded by the
European Union

Co-funded by the
European Union

The emblem must remain distinct and separate and cannot be modified by adding other visual marks, brands or text.

Apart from the emblem, no other visual identity or logo may be used to highlight the EU support.

When displayed in association with other logos (e.g. of beneficiaries or sponsors), the emblem must be displayed at least as prominently and visibly as the other logos.

For the purposes of their obligations under this Article, the beneficiaries may use the emblem without first obtaining approval from the granting authority. This does not, however, give them the right to

exclusive use. Moreover, they may not appropriate the emblem or any similar trademark or logo, either by registration or by any other means.

### 17.3 Quality of information — Disclaimer

Any communication or dissemination activity related to the action must use factually accurate information.

Moreover, it must indicate the following disclaimer (translated into local languages where appropriate):

> "Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or [name of the granting authority]. Neither the European Union nor the granting authority can be held responsible for them."

### 17.4 Specific communication, dissemination and visibility rules

Specific communication, dissemination and visibility rules (if any) are set out in Annex 5.

### 17.5 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 28).

Such breaches may also lead to other measures described in Chapter 5.

## ARTICLE 18 — SPECIFIC RULES FOR CARRYING OUT THE ACTION

### 18.1 Specific rules for carrying out the action

Specific rules for implementing the action (if any) are set out in Annex 5.

### 18.2 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 28).

Such a breach may also lead to other measures described in Chapter 5.

# SECTION 3 GRANT ADMINISTRATION

## ARTICLE 19 — GENERAL INFORMATION OBLIGATIONS

### 19.1 Information requests

The beneficiaries must provide — during the action or afterwards and in accordance with Article 7 — any information requested in order to verify eligibility of the lump sum contributions declared, proper implementation of the action and compliance with the other obligations under the Agreement.

The information provided must be accurate, precise and complete and in the format requested, including electronic format.

[redacted]

### 19.2 Participant Register data updates

The beneficiaries must keep — at all times, during the action or afterwards — their information stored in the Portal Participant Register up to date, in particular, their name, address, legal representatives, legal form and organisation type.

### 19.3 Information about events and circumstances which impact the action

The beneficiaries must immediately inform the granting authority (and the other beneficiaries) of any of the following:

(a) **events** which are likely to affect or delay the implementation of the action or affect the EU's financial interests, in particular:

(i) changes in their legal, financial, technical, organisational or ownership situation (including changes linked to one of the exclusion grounds listed in the declaration of honour signed before grant signature)

(ii) linked action information: not applicable

(b) **circumstances** affecting:

(i) the decision to award the grant or

(ii) compliance with requirements under the Agreement.

### 19.4 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 28).

Such breaches may also lead to other measures described in Chapter 5.

## ARTICLE 20 — RECORD-KEEPING

### 20.1 Keeping records and supporting documents

The beneficiaries must — at least until the time-limit set out in the Data Sheet (see Point 6) — keep records and other supporting documents to prove the proper implementation of the action (proper implementation of the work and/or achievement of the results as described in Annex 1) in line with the accepted standards in the respective field (if any); beneficiaries do not need to keep specific records on the actual costs incurred.

The records and supporting documents must be made available upon request (see Article 19) or in the context of checks, reviews, audits or investigations (see Article 25).

If there are on-going checks, reviews, audits, investigations, litigation or other pursuits of claims under the Agreement (including the extension of findings; see Article 25), the beneficiaries must keep these records and other supporting documentation until the end of these procedures.

The beneficiaries must keep the original documents. Digital and digitalised documents are considered

originals if they are authorised by the applicable national law. The granting authority may accept non-original documents if they offer a comparable level of assurance.

### 20.2 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, lump sum contributions insufficiently substantiated will be ineligible (see Article 6) and will be rejected (see Article 27), and the grant may be reduced (see Article 28).

Such breaches may also lead to other measures described in Chapter 5.

## ARTICLE 21 — REPORTING

### 21.1 Continuous reporting

The beneficiaries must continuously report on the progress of the action (e.g. **deliverables, milestones, outputs/outcomes, critical risks, indicators,** etc; if any), in the Portal Continuous Reporting tool and in accordance with the timing and conditions it sets out (as agreed with the granting authority).

Standardised deliverables (e.g. progress reports not linked to payments, reports on cumulative expenditure, special reports, etc; if any) must be submitted using the templates published on the Portal.

### 21.2 Periodic reporting: Technical reports and financial statements

In addition, the beneficiaries must provide reports to request payments, in accordance with the schedule and modalities set out in the Data Sheet (see Point 4.2):

- for additional prefinancings (if any): **an additional prefinancing report**
- for interim payments (if any) and the final payment: a **periodic report**

The prefinancing and periodic reports include a technical and financial part.

The technical part includes an overview of the action implementation. It must be prepared using the template available in the Portal Periodic Reporting tool.

The financial part of the additional prefinancing report includes a statement on the use of the previous prefinancing payment.

The financial part of the periodic report includes:

- the financial statement (consolidated statement for the consortium)
- the explanation on the use of resources (or detailed cost reporting table): not applicable
- the certificates on the financial statements (CFS): not applicable.

The **financial statement** must contain the lump sum contributions indicated in Annex 2, for the work packages that were completed during the reporting period.

For the last reporting period, the beneficiaries may exceptionally also declare partial lump sum

contributions for work packages that were not completed (e.g. due to force majeure or technical impossibility).

Lump sum contributions which are not declared in a financial statement will not be taken into account by the granting authority.

By signing the financial statement (directly in the Portal Periodic Reporting tool), the coordinator confirms (on behalf of the consortium) that:

- the information provided is complete, reliable and true
- the lump sum contributions declared are eligible (in particular, the work packages have been completed, that the work has been properly implemented and/or the results were achieved in accordance with Annex 1; see Article 6)
- the proper implementation and/or achievement can be substantiated by adequate records and supporting documents (see Article 20) that will be produced upon request (see Article 19) or in the context of checks, reviews, audits and investigations (see Article 25).

In case of recoveries (see Article 22), beneficiaries will be held responsible also for the lump sum contributions declared for their affiliated entities (if any).

### 21.3 Currency for financial statements and conversion into euros

The financial statements must be drafted in euro.

### 21.4 Reporting language

The reporting must be in the language of the Agreement, unless otherwise agreed with the granting authority (see Data Sheet, Point 4.2).

### 21.5 Consequences of non-compliance

If a report submitted does not comply with this Article, the granting authority may suspend the payment deadline (see Article 29) and apply other measures described in Chapter 5.

If the coordinator breaches its reporting obligations, the granting authority may terminate the grant or the coordinator's participation (see Article 32) or apply other measures described in Chapter 5.

## ARTICLE 22 — PAYMENTS AND RECOVERIES — CALCULATION OF AMOUNTS DUE

### 22.1 Payments and payment arrangements

Payments will be made in accordance with the schedule and modalities set out in the Data Sheet (see Point 4.2).

They will be made in euro to the bank account indicated by the coordinator (see Data Sheet, Point 4.2) and must be distributed without unjustified delay (restrictions may apply to distribution of the initial prefinancing payment; see Data Sheet, Point 4.2).

Payments to this bank account will discharge the granting authority from its payment obligation.

The cost of payment transfers will be borne as follows:

- the granting authority bears the cost of transfers charged by its bank
- the beneficiary bears the cost of transfers charged by its bank
- the party causing a repetition of a transfer bears all costs of the repeated transfer.

Payments by the granting authority will be considered to have been carried out on the date when they are debited to its account.

### 22.2 Recoveries

Recoveries will be made, if — at beneficiary termination, final payment or afterwards — it turns out that the granting authority has paid too much and needs to recover the amounts undue.

Each beneficiary's financial responsibility in case of recovery is in principle limited to their own debt and undue amounts of their affiliated entities.

In case of enforced recoveries (see Article 22.4), affiliated entities will be held liable for repaying debts of their beneficiaries, if required by the granting authority (see Data Sheet, Point 4.4).

### 22.3 Amounts due

#### 22.3.1 Prefinancing payments

The aim of the prefinancing is to provide the beneficiaries with a float.

It remains the property of the EU until the final payment.

For **initial prefinancings** (if any), the amount due, schedule and modalities are set out in the Data Sheet (see Point 4.2).

For **additional prefinancings** (if any), the amount due, schedule and modalities are also set out in the Data Sheet (see Point 4.2). However, if the statement on the use of the previous prefinancing payment shows that less than 70% was used, the amount set out in the Data Sheet will be reduced by the difference between the 70% threshold and the amount used.

The contribution to the Mutual Insurance Mechanism will be retained from the prefinancing payments (at the rate and in accordance with the modalities set out in the Data Sheet, see Point 4.2) and transferred to the Mechanism.

Prefinancing payments (or parts of them) may be offset (without the beneficiaries' consent) against amounts owed by a beneficiary to the granting authority — up to the amount due to that beneficiary.

For grants where the granting authority is the European Commission or an EU executive agency, offsetting may also be done against amounts owed to other Commission services or executive agencies.

Payments will not be made if the payment deadline or payments are suspended (see Articles 29 and 30).

#### 22.3.2 Amount due at beneficiary termination — Recovery

In case of beneficiary termination, the granting authority will determine the provisional amount due for the beneficiary concerned.

This will be done on the basis of work packages already completed in previous interim payments. Payments for ongoing/not yet completed work packages which the beneficiary was working on before termination (if any) will therefore be made only later on, with the next interim or final payments when those work packages have been completed.

The **amount due** will be calculated in the following step:

Step 1 — Calculation of the total accepted EU contribution

Step 1 — Calculation of the total accepted EU contribution

The granting authority will first calculate the 'accepted EU contribution' for the beneficiary, on the basis of the beneficiary's lump sum contributions for the work packages which were approved in previous interim payments.

After that, the granting authority will take into account grant reductions (if any). The resulting amount is the 'total accepted EU contribution' for the beneficiary.

The **balance** is then calculated by deducting the payments received (if any; see report on the distribution of payments in Article 32), from the total accepted EU contribution:

{total accepted EU contribution for the beneficiary

minus

{prefinancing and interim payments received (if any)}}.

If the balance is **negative**, it will be **recovered** in accordance with the following procedure:

The granting authority will send a **pre-information letter** to the beneficiary concerned:

- formally notifying the intention to recover, the amount due, the amount to be recovered and the reasons why and
- requesting observations within 30 days of receiving notification.

If no observations are submitted (or the granting authority decides to pursue recovery despite the observations it has received), it will confirm the amount to be recovered and ask this amount to be paid to the coordinator (**confirmation letter**).

If payment is not made to the coordinator by the date specified in the confirmation letter, the granting authority may call on the Mutual Insurance Mechanism to intervene, if continuation of the action is guaranteed and the conditions set out in the rules governing the Mechanism are met.

In this case, it will send a **beneficiary recovery letter**, together with a **debit note** with the terms and date for payment.

The debit note for the beneficiary will include the amount calculated for the affiliated entities which also had to end their participation (if any).

If payment is not made by the date specified in the debit note, the granting authority will **enforce recovery** in accordance with Article 22.4.

### 22.3.3 Interim payments

Interim payments reimburse the eligible lump sum contributions claimed for work packages implemented during the reporting periods (if any).

Interim payments (if any) will be made in accordance with the schedule and modalities set out the Data Sheet (see Point 4.2).

Payment is subject to the approval of the periodic report and the work packages declared. Their approval does not imply recognition of compliance, authenticity, completeness or correctness of their content.

Incomplete work packages and work packages that have not been delivered or cannot be approved will be rejected (see Article 27).

The **interim payment** will be calculated by the granting authority in the following steps:

Step 1 — Calculation of the total accepted EU contribution

Step 2 — Limit to the interim payment ceiling

Step 1 — Calculation of the total accepted EU contribution

The granting authority will first calculate the 'accepted EU contribution' for the action for the reporting period, by calculating the lump sum contributions for the approved work packages.

After that, the granting authority will take into account grant reductions from beneficiary termination (if any). The resulting amount is the 'total accepted EU contribution'.

Step 2 — Limit to the interim payment ceiling

The resulting amount is then capped to ensure that the total amount of prefinancing and interim payments (if any) does not exceed the interim payment ceiling set out in the Data Sheet (see Point 4.2).

Interim payments (or parts of them) may be offset (without the beneficiaries' consent) against amounts owed by a beneficiary to the granting authority — up to the amount due to that beneficiary.

For grants where the granting authority is the European Commission or an EU executive agency, offsetting may also be done against amounts owed to other Commission services or executive agencies.

Payments will not be made if the payment deadline or payments are suspended (see Articles 29 and 30).

### 22.3.4 Final payment — Final grant amount — Revenues and Profit — Recovery

The final payment (payment of the balance) reimburses the remaining eligible lump sum contributions claimed for the implemented work packages (if any).

[redacted]

The final payment will be made in accordance with the schedule and modalities set out in the Data Sheet (see Point 4.2).

Payment is subject to the approval of the final periodic report and the work packages declared. Their approval does not imply recognition of compliance, authenticity, completeness or correctness of their content.

Work packages (or parts of them) that have not been delivered or cannot be approved will be rejected (see Article 27).

The **final grant amount for the action** will be calculated in the following steps:

Step 1 — Calculation of the total accepted EU contribution

Step 2 — Limit to the maximum grant amount

Step 3 — Reduction due to the no-profit rule

Step 1 — Calculation of the total accepted EU contribution

The granting authority will first calculate the 'accepted EU contribution' for the action for all reporting periods, by calculating the lump sum contributions for the approved work packages.

After that, the granting authority will take into account grant reductions (if any). The resulting amount is the 'total accepted EU contribution'.

Step 2 — Limit to the maximum grant amount

Not applicable

Step 3 — Reduction due to the no-profit rule

Not applicable

The **balance** (final payment) is then calculated by deducting the total amount of prefinancing and interim payments already made (if any), from the final grant amount:

{final grant amount

minus

{prefinancing and interim payments made (if any)}}.

If the balance is **positive**, it will be **paid** to the coordinator.

The amount retained for the Mutual Insurance Mechanism (see above) will be released and **paid** to the coordinator (in accordance with the rules governing the Mechanism).

The final payment (or part of it) may be offset (without the beneficiaries' consent) against amounts owed by a beneficiary to the granting authority — up to the amount due to that beneficiary.

For grants where the granting authority is the European Commission or an EU executive agency, offsetting may also be done against amounts owed to other Commission services or executive agencies.

[redacted]

Payments will not be made if the payment deadline or payments are suspended (see Articles 29 and 30).

If — despite the release of the Mutual Insurance Mechanism contribution — the balance is **negative**, it will be **recovered** in accordance with the following procedure:

The granting authority will send a **pre-information letter** to the coordinator:

- formally notifying the intention to recover, the final grant amount, the amount to be recovered and the reasons why
- requesting a report on the distribution of payments to the beneficiaries within 30 days of receiving notification and
- requesting observations within 30 days of receiving notification.

If no observations are submitted (or the granting authority decides to pursue recovery despite the observations it has received) and the coordinator has submitted the report on the distribution of payments, it will calculate the **share of the debt per beneficiary**, by:

(a) identifying the beneficiaries for which the amount calculated as follows is negative:

{{{total accepted EU contribution for the beneficiary

divided by

total accepted EU contribution for the action}

multiplied by

final grant amount for the action},

minus

{prefinancing and interim payments received by the beneficiary (if any)}}

and

(b) dividing the debt:

{{amount calculated according to point (a) for the beneficiary concerned

divided by

the sum of the amounts calculated according to point (a) for all the beneficiaries identified according to point (a)}

multiplied by

the amount to be recovered}.

and confirm the amount to be recovered from each beneficiary concerned (**confirmation letter**), together with **debit notes** with the terms and date for payment.

The debit notes for beneficiaries will include the amounts calculated for their affiliated entities (if any).

If the coordinator has not submitted the report on the distribution of payments, the granting authority

will **recover** the full amount from the coordinator (**confirmation letter** and **debit note** with the terms and date for payment).

If payment is not made by the date specified in the debit note, the granting authority will **enforce recovery** in accordance with Article 22.4.

### 22.3.5 Audit implementation after final payment — Revised final grant amount — Recovery

If — after the final payment (in particular, after checks, reviews, audits or investigations; see Article 25) — the granting authority rejects lump sum contributions (see Article 27) or reduces the grant (see Article 28), it will calculate the **revised final grant amount** for the beneficiary concerned.

The **beneficiary revised final grant amount** will be calculated in the following step:

Step 1 — Calculation of the revised total accepted EU contribution

Step 1 — Calculation of the revised total accepted EU contribution

The granting authority will first calculate the 'revised accepted EU contribution' for the beneficiary, by calculating the 'revised accepted contributions'.

After that, it will take into account grant reductions (if any). The resulting 'revised total accepted EU contribution' is the beneficiary revised final grant amount.

If the revised final grant amount is lower than the beneficiary's final grant amount (i.e. its share in the final grant amount for the action), it will be **recovered** in accordance with the following procedure:

The **beneficiary final grant amount** (i.e. share in the final grant amount for the action) is calculated as follows:

{{total accepted EU contribution for the beneficiary

divided by

total accepted EU contribution for the action}

multiplied by

final grant amount for the action}.

The granting authority will send a **pre-information letter** to the beneficiary concerned:

- formally notifying the intention to recover, the amount to be recovered and the reasons why and
- requesting observations within 30 days of receiving notification.

If no observations are submitted (or the granting authority decides to pursue recovery despite the observations it has received), it will confirm the amount to be recovered (**confirmation letter**), together with a **debit note** with the terms and the date for payment.

Recoveries against affiliated entities (if any) will be handled through their beneficiaries.

If payment is not made by the date specified in the debit note, the granting authority will **enforce recovery** in accordance with Article 22.4.

[redacted]

### 22.4 Enforced recovery

If payment is not made by the date specified in the debit note, the amount due will be recovered:

(a) by offsetting the amount — without the coordinator or beneficiary's consent — against any amounts owed to the coordinator or beneficiary by the granting authority.

In exceptional circumstances, to safeguard the EU financial interests, the amount may be offset before the payment date specified in the debit note.

For grants where the granting authority is the European Commission or an EU executive agency, debts may also be offset against amounts owed by other Commission services or executive agencies.

(b) financial guarantee(s): not applicable

(c) joint and several liability of beneficiaries: not applicable

(d) by holding affiliated entities jointly and severally liable (if any, see Data Sheet, Point 4.4)

(e) by taking legal action (see Article 43) or, provided that the granting authority is the European Commission or an EU executive agency, by adopting an enforceable decision under Article 299 of the Treaty on the Functioning of the EU (TFEU) and Article 100(2) of EU Financial Regulation 2018/1046.

If the Mutual Insurance Mechanism was called on by the granting authority to intervene, recovery will be continued in the name of the Mutual Insurance Mechanism. If two debit notes were sent, the second one (in the name of the Mutual Insurance Mechanism) will be considered to replace the first one (in the name of the granting authority). Where the MIM intervened, offsetting, enforceable decisions or any other of the above-mentioned forms of enforced recovery may be used mutatis mutandis.

The amount to be recovered will be increased by **late-payment interest** at the rate set out in Article 23.5, from the day following the payment date in the debit note, up to and including the date the full payment is received.

Partial payments will be first credited against expenses, charges and late-payment interest and then against the principal.

Bank charges incurred in the recovery process will be borne by the beneficiary, unless Directive 2015/2366[15] applies.

For grants where the granting authority is an EU executive agency, enforced recovery by offsetting or enforceable decision will be done by the services of the European Commission (see also Article 43).

### 22.5 Consequences of non-compliance

**22.5.1** If the granting authority does not pay within the payment deadlines (see above), the beneficiaries are entitled to **late-payment interest** at the reference rate applied by the European

[15] Directive (EU) 2015/2366 of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and 2013/36/EU and Regulation (EU) No 1093/2010, and repealing Directive 2007/64/EC (OJ L 337, 23.12.2015, p. 35).

Central Bank (ECB) for its main refinancing operations in euros, plus the percentage specified in the Data Sheet (Point 4.2). The ECB reference rate to be used is the rate in force on the first day of the month in which the payment deadline expires, as published in the C series of the *Official Journal of the European Union*.

If the late-payment interest is lower than or equal to EUR 200, it will be paid to the coordinator only on request submitted within two months of receiving the late payment.

Late-payment interest is not due if all beneficiaries are EU Member States (including regional and local government authorities or other public bodies acting on behalf of a Member State for the purpose of this Agreement).

If payments or the payment deadline are suspended (see Articles 29 and 30), payment will not be considered as late.

Late-payment interest covers the period running from the day following the due date for payment (see above), up to and including the date of payment.

Late-payment interest is not considered for the purposes of calculating the final grant amount.

**22.5.2** If the coordinator breaches any of its obligations under this Article, the grant may be reduced (see Article 28) and the grant or the coordinator may be terminated (see Article 32).

Such breaches may also lead to other measures described in Chapter 5.

## ARTICLE 23 — GUARANTEES

Not applicable

## ARTICLE 24 — CERTIFICATES

Not applicable

## ARTICLE 25 — CHECKS, REVIEWS, AUDITS AND INVESTIGATIONS — EXTENSION OF FINDINGS

### 25.1 Granting authority checks, reviews and audits

#### 25.1.1 Internal checks

The granting authority may — during the action or afterwards — check the proper implementation of the action and compliance with the obligations under the Agreement, including assessing lump sum contributions, deliverables and reports.

#### 25.1.2 Project reviews

The granting authority may carry out reviews on the proper implementation of the action and compliance with the obligations under the Agreement (general project reviews or specific issues reviews).

Such project reviews may be started during the implementation of the action and until the time-limit

set out in the Data Sheet (see Point 6). They will be formally notified to the coordinator or beneficiary concerned and will be considered to start on the date of the notification.

If needed, the granting authority may be assisted by independent, outside experts. If it uses outside experts, the coordinator or beneficiary concerned will be informed and have the right to object on grounds of commercial confidentiality or conflict of interest.

The coordinator or beneficiary concerned must cooperate diligently and provide — within the deadline requested — any information and data in addition to deliverables and reports already submitted. The granting authority may request beneficiaries to provide such information to it directly. Sensitive information and documents will be treated in accordance with Article 13.

The coordinator or beneficiary concerned may be requested to participate in meetings, including with the outside experts.

For **on-the-spot visits**, the beneficiary concerned must allow access to sites and premises (including to the outside experts) and must ensure that information requested is readily available.

Information provided must be accurate, precise and complete and in the format requested, including electronic format.

On the basis of the review findings, a **project review report** will be drawn up.

The granting authority will formally notify the project review report to the coordinator or beneficiary concerned, which has 30 days from receiving notification to make observations.

Project reviews (including project review reports) will be in the language of the Agreement.

### 25.1.3 Audits

The granting authority may carry out audits on the proper implementation of the action and compliance with the obligations under the Agreement.

Such audits may be started during the implementation of the action and until the time-limit set out in the Data Sheet (see Point 6). They will be formally notified to the beneficiary concerned and will be considered to start on the date of the notification.

The granting authority may use its own audit service, delegate audits to a centralised service or use external audit firms. If it uses an external firm, the beneficiary concerned will be informed and have the right to object on grounds of commercial confidentiality or conflict of interest.

The beneficiary concerned must cooperate diligently and provide — within the deadline requested — any information (including complete accounts, individual salary statements or other personal data) to verify compliance with the Agreement. Sensitive information and documents will be treated in accordance with Article 13.

For **on-the-spot** visits, the beneficiary concerned must allow access to sites and premises (including for the external audit firm) and must ensure that information requested is readily available.

Information provided must be accurate, precise and complete and in the format requested, including electronic format.

On the basis of the audit findings, a **draft audit report** will be drawn up.

The auditors will formally notify the draft audit report to the beneficiary concerned, which has 30 days from receiving notification to make observations (contradictory audit procedure).

The **final audit report** will take into account observations by the beneficiary concerned and will be formally notified to them.

Audits (including audit reports) will be in the language of the Agreement.

### 25.2 European Commission checks, reviews and audits in grants of other granting authorities

Where the granting authority is not the European Commission, the latter has the same rights of checks, reviews and audits as the granting authority.

### 25.3 Access to records for assessing simplified forms of funding

The beneficiaries must give the European Commission access to their statutory records for the periodic assessment of simplified forms of funding which are used in EU programmes.

### 25.4 OLAF, EPPO and ECA audits and investigations

The following bodies may also carry out checks, reviews, audits and investigations — during the action or afterwards:

- the European Anti-Fraud Office (OLAF) under Regulations No 883/2013[16] and No 2185/96[17]
- the European Public Prosecutor's Office (EPPO) under Regulation 2017/1939
- the European Court of Auditors (ECA) under Article 287 of the Treaty on the Functioning of the EU (TFEU) and Article 257 of EU Financial Regulation 2018/1046.

If requested by these bodies, the beneficiary concerned must provide full, accurate and complete information in the format requested (including complete accounts, individual salary statements or other personal data, including in electronic format) and allow access to sites and premises for on-the-spot visits or inspections — as provided for under these Regulations.

To this end, the beneficiary concerned must keep all relevant information relating to the action, at least until the time-limit set out in the Data Sheet (Point 6) and, in any case, until any ongoing checks, reviews, audits, investigations, litigation or other pursuits of claims have been concluded.

### 25.5 Consequences of checks, reviews, audits and investigations — Extension of findings

#### 25.5.1 Consequences of checks, reviews, audits and investigations in this grant

[16] Regulation (EU, Euratom) No 883/2013 of the European Parliament and of the Council of 11 September 2013 concerning investigations conducted by the European Anti-Fraud Office (OLAF) and repealing Regulation (EC) No 1073/1999 of the European Parliament and of the Council and Council Regulation (Euratom) No 1074/1999 (OJ L 248, 18/09/2013, p. 1).

[17] Council Regulation (Euratom, EC) No 2185/96 of 11 November 1996 concerning on-the-spot checks and inspections carried out by the Commission in order to protect the European Communities' financial interests against fraud and other irregularities (OJ L 292, 15/11/1996, p. 2).

[redacted]

Findings in checks, reviews, audits or investigations carried out in the context of this grant may lead to rejections (see Article 27), grant reduction (see Article 28) or other measures described in Chapter 5.

Rejections or grant reductions after the final payment will lead to a revised final grant amount (see Article 22).

Findings in checks, reviews, audits or investigations during the action implementation may lead to a request for amendment (see Article 39), to change the description of the action set out in Annex 1.

Checks, reviews, audits or investigations that find systemic or recurrent errors, irregularities, fraud or breach of obligations in any EU grant may also lead to consequences in other EU grants awarded under similar conditions ('extension to other grants').

Moreover, findings arising from an OLAF or EPPO investigation may lead to criminal prosecution under national law.

**25.5.2 Extension from other grants**

Findings of checks, reviews, audits or investigations in other grants may be extended to this grant, if:

(a) the beneficiary concerned is found, in other EU grants awarded under similar conditions, to have committed systemic or recurrent errors, irregularities, fraud or breach of obligations that have a material impact on this grant and

(b) those findings are formally notified to the beneficiary concerned — together with the list of grants affected by the findings — within the time-limit for audits set out in the Data Sheet (see Point 6).

The granting authority will formally notify the beneficiary concerned of the intention to extend the findings and the list of grants affected.

If the extension concerns **rejections of lump sum contributions**: the notification will include:

(a) an invitation to submit observations on the list of grants affected by the findings

(b) the request to submit revised financial statements for all grants affected

(c) the correction rate for extrapolation, established on the basis of the systemic or recurrent errors, to calculate the amounts to be rejected, if the beneficiary concerned:

(i) considers that the submission of revised financial statements is not possible or practicable or

(ii) does not submit revised financial statements.

If the extension concerns **grant reductions**: the notification will include:

(a) an invitation to submit observations on the list of grants affected by the findings and

(b) the **correction rate for extrapolation**, established on the basis of the systemic or recurrent errors and the principle of proportionality.

The beneficiary concerned has **60 days** from receiving notification to submit observations, revised financial statements or to propose a duly substantiated **alternative correction method/rate**.

On the basis of this, the granting authority will analyse the impact and decide on the implementation (i.e. start rejection or grant reduction procedures, either on the basis of the revised financial statements or the announced/alternative method/rate or a mix of those; see Articles 27 and 28).

### 25.6 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, lump sum contributions insufficiently substantiated will be ineligible (see Article 6) and will be rejected (see Article 27), and the grant may be reduced (see Article 28).

Such breaches may also lead to other measures described in Chapter 5.

## ARTICLE 26 — IMPACT EVALUATIONS

### 26.1 Impact evaluation

The granting authority may carry out impact evaluations of the action, measured against the objectives and indicators of the EU programme funding the grant.

Such evaluations may be started during implementation of the action and until the time-limit set out in the Data Sheet (see Point 6). They will be formally notified to the coordinator or beneficiaries and will be considered to start on the date of the notification.

If needed, the granting authority may be assisted by independent outside experts.

The coordinator or beneficiaries must provide any information relevant to evaluate the impact of the action, including information in electronic format.

### 26.2 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the granting authority may apply the measures described in Chapter 5.

# CHAPTER 5 CONSEQUENCES OF NON-COMPLIANCE

## SECTION 1 REJECTIONS AND GRANT REDUCTION

## ARTICLE 27 — REJECTION OF CONTRIBUTIONS

### 27.1 Conditions

The granting authority will — at interim payment, final payment or afterwards — reject any lump sum contributions which are ineligible (see Article 6), in particular following checks, reviews, audits or investigations (see Article 25).

The rejection may also be based on the extension of findings from other grants to this grant (see Article 25).

Ineligible lump sum contributions will be rejected.

### 27.2 Procedure

If the rejection does not lead to a recovery, the granting authority will formally notify the coordinator or beneficiary concerned of the rejection, the amounts and the reasons why. The coordinator or beneficiary concerned may — within 30 days of receiving notification — submit observations if it disagrees with the rejection (payment review procedure).

If the rejection leads to a recovery, the granting authority will follow the contradictory procedure with pre-information letter set out in Article 22.

### 27.3 Effects

If the granting authority rejects lump sum contributions, it will deduct them from the lump sum contributions declared and then calculate the amount due (and, if needed, make a recovery; see Article 22).

## ARTICLE 28 — GRANT REDUCTION

### 28.1 Conditions

The granting authority may — at beneficiary termination, final payment or afterwards — reduce the grant for a beneficiary, if:

(a) the beneficiary (or a person having powers of representation, decision-making or control, or person essential for the award/implementation of the grant) has committed:

  (i) substantial errors, irregularities or fraud or

  (ii) serious breach of obligations under this Agreement or during its award (including improper implementation of the action, non-compliance with the call conditions, submission of false information, failure to provide required information, breach of ethics or security rules (if applicable), etc.), or

(b) the beneficiary (or a person having powers of representation, decision-making or control, or person essential for the award/implementation of the grant) has committed — in other EU grants awarded to it under similar conditions — systemic or recurrent errors, irregularities, fraud or serious breach of obligations that have a material impact on this grant (extension of findings; see Article 25.5).

The amount of the reduction will be calculated for each beneficiary concerned and proportionate to the seriousness and the duration of the errors, irregularities or fraud or breach of obligations, by applying an individual reduction rate to their accepted EU contribution.

### 28.2 Procedure

If the grant reduction does not lead to a recovery, the granting authority will formally notify the

coordinator or beneficiary concerned of the reduction, the amount to be reduced and the reasons why. The coordinator or beneficiary concerned may — within 30 days of receiving notification — submit observations if it disagrees with the reduction (payment review procedure).

If the grant reduction leads to a recovery, the granting authority will follow the contradictory procedure with pre-information letter set out in Article 22.

### 28.3 Effects

If the granting authority reduces the grant, it will deduct the reduction and then calculate the amount due (and, if needed, make a recovery; see Article 22).

## SECTION 2 SUSPENSION AND TERMINATION

## ARTICLE 29 — PAYMENT DEADLINE SUSPENSION

### 29.1 Conditions

The granting authority may — at any moment — suspend the payment deadline if a payment cannot be processed because:

(a) the required report (see Article 21) has not been submitted or is not complete or additional information is needed

(b) there are doubts about the amount to be paid (e.g. ongoing extension procedure, queries about eligibility, need for a grant reduction, etc.) and additional checks, reviews, audits or investigations are necessary, or

(c) there are other issues affecting the EU financial interests.

### 29.2 Procedure

The granting authority will formally notify the coordinator of the suspension and the reasons why.

The suspension will **take effect** the day the notification is sent.

If the conditions for suspending the payment deadline are no longer met, the suspension will be **lifted** — and the remaining time to pay (see Data Sheet, Point 4.2) will resume.

If the suspension exceeds two months, the coordinator may request the granting authority to confirm if the suspension will continue.

If the payment deadline has been suspended due to the non-compliance of the report and the revised report is not submitted (or was submitted but is also rejected), the granting authority may also terminate the grant or the participation of the coordinator (see Article 32).

## ARTICLE 30 — PAYMENT SUSPENSION

### 30.1 Conditions

The granting authority may — at any moment — suspend payments, in whole or in part for one or more beneficiaries, if:

(a) a beneficiary (or a person having powers of representation, decision-making or control, or person essential for the award/implementation of the grant) has committed or is suspected of having committed:

(i) substantial errors, irregularities or fraud or

(ii) serious breach of obligations under this Agreement or during its award (including improper implementation of the action, non-compliance with the call conditions, submission of false information, failure to provide required information, breach of ethics or security rules (if applicable), etc.), or

(b) a beneficiary (or a person having powers of representation, decision-making or control, or person essential for the award/implementation of the grant) has committed — in other EU grants awarded to it under similar conditions — systemic or recurrent errors, irregularities, fraud or serious breach of obligations that have a material impact on this grant (extension of findings; see Article 25.5).

If payments are suspended for one or more beneficiaries, the granting authority will make partial payment(s) for the part(s) not suspended. If suspension concerns the final payment, the payment (or recovery) of the remaining amount after suspension is lifted will be considered to be the payment that closes the action.

### 30.2 Procedure

Before suspending payments, the granting authority will send a **pre-information letter** to the beneficiary concerned:

- formally notifying the intention to suspend payments and the reasons why and
- requesting observations within 30 days of receiving notification.

If the granting authority does not receive observations or decides to pursue the procedure despite the observations it has received, it will confirm the suspension (**confirmation letter**). Otherwise, it will formally notify that the procedure is discontinued.

At the end of the suspension procedure, the granting authority will also inform the coordinator.

The suspension will **take effect** the day after the confirmation notification is sent.

If the conditions for resuming payments are met, the suspension will be **lifted**. The granting authority will formally notify the beneficiary concerned (and the coordinator) and set the suspension end date.

During the suspension, no prefinancing will be paid to the beneficiaries concerned. For interim payments, the periodic reports for all reporting periods except the last one (see Article 21) must not contain any financial statements from the beneficiary concerned (or its affiliated entities). The coordinator must include them in the next periodic report after the suspension is lifted or — if suspension is not lifted before the end of the action — in the last periodic report.

## ARTICLE 31 — GRANT AGREEMENT SUSPENSION

[redacted]

### 31.1 Consortium-requested GA suspension

#### 31.1.1 Conditions and procedure

The beneficiaries may request the suspension of the grant or any part of it, if exceptional circumstances — in particular *force majeure* (see Article 35) — make implementation impossible or excessively difficult.

The coordinator must submit a request for **amendment** (see Article 39), with:

- the reasons why
- the date the suspension takes effect; this date may be before the date of the submission of the amendment request and
- the expected date of resumption.

The suspension will **take effect** on the day specified in the amendment.

Once circumstances allow for implementation to resume, the coordinator must immediately request another **amendment** of the Agreement to set the suspension end date, the resumption date (one day after suspension end date), extend the duration and make other changes necessary to adapt the action to the new situation (see Article 39) — unless the grant has been terminated (see Article 32). The suspension will be **lifted** with effect from the suspension end date set out in the amendment. This date may be before the date of the submission of the amendment request.

During the suspension, no prefinancing will be paid. Moreover, no work may be done. Ongoing work packages must be interrupted and no new work packages may be started.

### 31.2 EU-initiated GA suspension

#### 31.2.1 Conditions

The granting authority may suspend the grant or any part of it, if:

(a) a beneficiary (or a person having powers of representation, decision-making or control, or person essential for the award/implementation of the grant) has committed or is suspected of having committed:

  (i) substantial errors, irregularities or fraud or

  (ii) serious breach of obligations under this Agreement or during its award (including improper implementation of the action, non-compliance with the call conditions, submission of false information, failure to provide required information, breach of ethics or security rules (if applicable), etc.), or

(b) a beneficiary (or a person having powers of representation, decision-making or control, or person essential for the award/implementation of the grant) has committed — in other EU grants awarded to it under similar conditions — systemic or recurrent errors, irregularities, fraud or serious breach of obligations that have a material impact on this grant (extension of findings; see Article 25.5)

(c) other:

[redacted]

(i) linked action issues: not applicable

(ii) the action has lost its scientific or technological relevance, for EIC Accelerator actions: the action has lost its economic relevance, for challenge-based EIC Pathfinder actions and Horizon Europe Missions: the action has lost its relevance as part of the Portfolio for which it has been initially selected

#### 31.2.2 Procedure

Before suspending the grant, the granting authority will send a **pre-information letter** to the coordinator:

- formally notifying the intention to suspend the grant and the reasons why and
- requesting observations within 30 days of receiving notification.

If the granting authority does not receive observations or decides to pursue the procedure despite the observations it has received, it will confirm the suspension (**confirmation letter**). Otherwise, it will formally notify that the procedure is discontinued.

The suspension will **take effect** the day after the confirmation notification is sent (or on a later date specified in the notification).

Once the conditions for resuming implementation of the action are met, the granting authority will formally notify the coordinator a **lifting of suspension letter**, in which it will set the suspension end date and invite the coordinator to request an amendment of the Agreement to set the resumption date (one day after suspension end date), extend the duration and make other changes necessary to adapt the action to the new situation (see Article 39) — unless the grant has been terminated (see Article 32). The suspension will be **lifted** with effect from the suspension end date set out in the lifting of suspension letter. This date may be before the date on which the letter is sent.

During the suspension, no prefinancing will be paid. Moreover, no work may be done. Ongoing work packages must be interrupted and no new work packages may be started.

The beneficiaries may not claim damages due to suspension by the granting authority (see Article 33).

Grant suspension does not affect the granting authority's right to terminate the grant or a beneficiary (see Article 32) or reduce the grant (see Article 28).

## ARTICLE 32 — GRANT AGREEMENT OR BENEFICIARY TERMINATION

### 32.1 Consortium-requested GA termination

#### 32.1.1 Conditions and procedure

The beneficiaries may request the termination of the grant.

The coordinator must submit a request for **amendment** (see Article 39), with:

- the reasons why
- the date the consortium ends work on the action ('end of work date') and

- the date the termination takes effect ('termination date'); this date must be after the date of the submission of the amendment request.

The termination will **take effect** on the termination date specified in the amendment.

If no reasons are given or if the granting authority considers the reasons do not justify termination, it may consider the grant terminated improperly.

#### 32.1.2 Effects

The coordinator must — within 60 days from when termination takes effect — submit a **periodic report** (for the open reporting period until termination).

The granting authority will calculate the final grant amount and final payment on the basis of the report submitted and taking into account the lump sum contributions for activities implemented before the end of work date (see Article 22). Partial lump sum contributions for work packages that were not completed (e.g. due to technical reasons) may exceptionally be taken into account.

If the granting authority does not receive the report within the deadline, only lump sum contributions which are included in an approved periodic report will be taken into account (no contributions if no periodic report was ever approved).

Improper termination may lead to a grant reduction (see Article 28).

After termination, the beneficiaries' obligations (in particular Articles 13 (confidentiality and security), 16 (IPR), 17 (communication, dissemination and visibility), 21 (reporting), 25 (checks, reviews, audits and investigations), 26 (impact evaluation), 27 (rejections), 28 (grant reduction) and 42 (assignment of claims)) continue to apply.

### 32.2 Consortium-requested beneficiary termination

#### 32.2.1 Conditions and procedure

The coordinator may request the termination of the participation of one or more beneficiaries, on request of the beneficiary concerned or on behalf of the other beneficiaries.

The coordinator must submit a request for **amendment** (see Article 39), with:

- the reasons why
- the opinion of the beneficiary concerned (or proof that this opinion has been requested in writing)
- the date the beneficiary ends work on the action ('end of work date')
- the date the termination takes effect ('termination date'); this date must be after the date of the submission of the amendment request.

If the termination concerns the coordinator and is done without its agreement, the amendment request must be submitted by another beneficiary (acting on behalf of the consortium).

The termination will **take effect** on the termination date specified in the amendment.

If no information is given or if the granting authority considers that the reasons do not justify termination, it may consider the beneficiary to have been terminated improperly.

#### 32.2.2 Effects

The coordinator must — within 60 days from when termination takes effect — submit:

(i) a **report on the distribution of payments** to the beneficiary concerned

(ii) a **termination report** from the beneficiary concerned, for the open reporting period until termination, containing an overview of the progress of the work

(iii) a second **request for amendment** (see Article 39) with other amendments needed (e.g. reallocation of the tasks and the estimated budget of the terminated beneficiary; addition of a new beneficiary to replace the terminated beneficiary; change of coordinator, etc.).

The granting authority will calculate the amount due to the beneficiary on the basis of the reports submitted in previous interim payments (i.e. beneficiary's lump sum contributions for completed and approved work packages).

Lump sum contributions for ongoing/not yet completed work packages will have to be included in the periodic report for the next reporting periods when those work packages have been completed.

If the granting authority does not receive the report on the distribution of payments within the deadline, it will consider that:

- the coordinator did not distribute any payment to the beneficiary concerned and that
- the beneficiary concerned must not repay any amount to the coordinator.

If the second request for amendment is accepted by the granting authority, the Agreement is **amended** to introduce the necessary changes (see Article 39).

If the second request for amendment is rejected by the granting authority (because it calls into question the decision awarding the grant or breaches the principle of equal treatment of applicants), the grant may be terminated (see Article 32).

Improper termination may lead to a reduction of the grant (see Article 31) or grant termination (see Article 32).

After termination, the concerned beneficiary's obligations (in particular Articles 13 (confidentiality and security), 16 (IPR), 17 (communication, dissemination and visibility), 21 (reporting), 25 (checks, reviews, audits and investigations), 26 (impact evaluation), 27 (rejections), 28 (grant reduction) and 42 (assignment of claims)) continue to apply.

### 32.3 EU-initiated GA or beneficiary termination

#### 32.3.1 Conditions

The granting authority may terminate the grant or the participation of one or more beneficiaries, if:

(a) one or more beneficiaries do not accede to the Agreement (see Article 40)

[redacted]

(b) a change to the action or the legal, financial, technical, organisational or ownership situation of a beneficiary is likely to substantially affect the implementation of the action or calls into question the decision to award the grant (including changes linked to one of the exclusion grounds listed in the declaration of honour)

(c) following termination of one or more beneficiaries, the necessary changes to the Agreement (and their impact on the action) would call into question the decision awarding the grant or breach the principle of equal treatment of applicants

(d) implementation of the action has become impossible or the changes necessary for its continuation would call into question the decision awarding the grant or breach the principle of equal treatment of applicants

(e) a beneficiary (or person with unlimited liability for its debts) is subject to bankruptcy proceedings or similar (including insolvency, winding-up, administration by a liquidator or court, arrangement with creditors, suspension of business activities, etc.)

(f) a beneficiary (or person with unlimited liability for its debts) is in breach of social security or tax obligations

(g) a beneficiary (or person having powers of representation, decision-making or control, or person essential for the award/implementation of the grant) has been found guilty of grave professional misconduct

(h) a beneficiary (or person having powers of representation, decision-making or control, or person essential for the award/implementation of the grant) has committed fraud, corruption, or is involved in a criminal organisation, money laundering, terrorism-related crimes (including terrorism financing), child labour or human trafficking

(i) a beneficiary (or person having powers of representation, decision-making or control, or person essential for the award/implementation of the grant) was created under a different jurisdiction with the intent to circumvent fiscal, social or other legal obligations in the country of origin (or created another entity with this purpose)

(j) a beneficiary (or person having powers of representation, decision-making or control, or person essential for the award/implementation of the grant) has committed:

  (i) substantial errors, irregularities or fraud or

  (ii) serious breach of obligations under this Agreement or during its award (including improper implementation of the action, non-compliance with the call conditions, submission of false information, failure to provide required information, breach of ethics or security rules (if applicable), etc.)

(k) a beneficiary (or person having powers of representation, decision-making or control, or person essential for the award/implementation of the grant) has committed — in other EU grants awarded to it under similar conditions — systemic or recurrent errors, irregularities, fraud or serious breach of obligations that have a material impact on this grant (extension of findings; see Article 25.5)

(l) despite a specific request by the granting authority, a beneficiary does not request — through the coordinator — an amendment to the Agreement to end the participation of one of its

affiliated entities or associated partners that is in one of the situations under points (d), (f), (e), (g), (h), (i) or (j) and to reallocate its tasks, or

(m) other:

(i) linked action issues: not applicable

(ii) the action has lost its scientific or technological relevance, for EIC Accelerator actions: the action has lost its economic relevance, for challenge-based EIC Pathfinder actions and Horizon Europe Missions: the action has lost its relevance as part of the Portfolio for which it has been initially selected

### 32.3.2 Procedure

Before terminating the grant or participation of one or more beneficiaries, the granting authority will send **a pre-information letter** to the coordinator or beneficiary concerned:

- formally notifying the intention to terminate and the reasons why and
- requesting observations within 30 days of receiving notification.

If the granting authority does not receive observations or decides to pursue the procedure despite the observations it has received, it will confirm the termination and the date it will take effect (**confirmation letter**). Otherwise, it will formally notify that the procedure is discontinued.

For beneficiary terminations, the granting authority will — at the end of the procedure — also inform the coordinator.

The termination will **take effect** the day after the confirmation notification is sent (or on a later date specified in the notification; 'termination date').

### 32.3.3 Effects

(a) for **GA termination**:

The coordinator must — within 60 days from when termination takes effect — submit a **periodic report** (for the last open reporting period until termination).

The granting authority will calculate the final grant amount and final payment on the basis of the report submitted and taking into account the lump sum contributions for activities implemented before termination takes effect (see Article 22). Partial lump sum contributions for work packages that were not completed (e.g. due to technical reasons) may exceptionally be taken into account.

If the grant is terminated for breach of the obligation to submit reports, the coordinator may not submit any report after termination.

If the granting authority does not receive the report within the deadline, only lump sum contributions which are included in an approved periodic report will be taken into account (no contributions if no periodic report was ever approved).

Termination does not affect the granting authority's right to reduce the grant (see Article 28) or to impose administrative sanctions (see Article 34).

The beneficiaries may not claim damages due to termination by the granting authority (see Article 33).

After termination, the beneficiaries' obligations (in particular Articles 13 (confidentiality and security), 16 (IPR), 17 (communication, dissemination and visibility), 21 (reporting), 25 (checks, reviews, audits and investigations), 26 (impact evaluation), 27 (rejections), 28 (grant reduction) and 42 (assignment of claims)) continue to apply.

(b) for **beneficiary termination**:

The coordinator must — within 60 days from when termination takes effect — submit:

(i) a **report on the distribution of payments** to the beneficiary concerned

(ii) a **termination report** from the beneficiary concerned, for the open reporting period until termination, containing an overview of the progress of the work

(iii) a **request for amendment** (see Article 39) with any amendments needed (e.g. reallocation of the tasks and the estimated budget of the terminated beneficiary; addition of a new beneficiary to replace the terminated beneficiary; change of coordinator, etc.).

The granting authority will calculate the amount due to the beneficiary on the basis of the reports submitted in previous interim payments (i.e. beneficiary's lump sum contributions for completed and approved work packages).

Lump sum contributions for ongoing/not yet completed work packages will have to be included in the periodic report for the next reporting periods when those work packages have been completed.

If the granting authority does not receive the report on the distribution of payments within the deadline, it will consider that:

- the coordinator did not distribute any payment to the beneficiary concerned and that
- the beneficiary concerned must not repay any amount to the coordinator.

If the request for amendment is accepted by the granting authority, the Agreement is **amended** to introduce the necessary changes (see Article 39).

If the request for amendment is rejected by the granting authority (because it calls into question the decision awarding the grant or breaches the principle of equal treatment of applicants), the grant may be terminated (see Article 32).

After termination, the concerned beneficiary's obligations (in particular Articles 13 (confidentiality and security), 16 (IPR), 17 (communication, dissemination and visibility), 21 (reporting), 25 (checks, reviews, audits and investigations), 26 (impact evaluation), 27 (rejections), 28 (grant reduction) and 42 (assignment of claims)) continue to apply.

## SECTION 3 OTHER CONSEQUENCES: DAMAGES AND ADMINISTRATIVE SANCTIONS

[redacted]

## ARTICLE 33 — DAMAGES

### 33.1 Liability of the granting authority

The granting authority cannot be held liable for any damage caused to the beneficiaries or to third parties as a consequence of the implementation of the Agreement, including for gross negligence.

The granting authority cannot be held liable for any damage caused by any of the beneficiaries or other participants involved in the action, as a consequence of the implementation of the Agreement.

### 33.2 Liability of the beneficiaries

The beneficiaries must compensate the granting authority for any damage it sustains as a result of the implementation of the action or because the action was not implemented in full compliance with the Agreement, provided that it was caused by gross negligence or wilful act.

The liability does not extend to indirect or consequential losses or similar damage (such as loss of profit, loss of revenue or loss of contracts), provided such damage was not caused by wilful act or by a breach of confidentiality.

## ARTICLE 34 — ADMINISTRATIVE SANCTIONS AND OTHER MEASURES

Nothing in this Agreement may be construed as preventing the adoption of administrative sanctions (i.e. exclusion from EU award procedures and/or financial penalties) or other public law measures, in addition or as an alternative to the contractual measures provided under this Agreement (see, for instance, Articles 135 to 145 EU Financial Regulation 2018/1046 and Articles 4 and 7 of Regulation 2988/95[18]).

# SECTION 4 FORCE MAJEURE

## ARTICLE 35 — FORCE MAJEURE

A party prevented by force majeure from fulfilling its obligations under the Agreement cannot be considered in breach of them.

'Force majeure' means any situation or event that:

- prevents either party from fulfilling their obligations under the Agreement,
- was unforeseeable, exceptional situation and beyond the parties' control,
- was not due to error or negligence on their part (or on the part of other participants involved in the action), and
- proves to be inevitable in spite of exercising all due diligence.

Any situation constituting force majeure must be formally notified to the other party without delay, stating the nature, likely duration and foreseeable effects.

[18] Council Regulation (EC, Euratom) No 2988/95 of 18 December 1995 on the protection of the European Communities financial interests (OJ L 312, 23.12.1995, p. 1).

The parties must immediately take all the necessary steps to limit any damage due to force majeure and do their best to resume implementation of the action as soon as possible.

## CHAPTER 6 FINAL PROVISIONS

### ARTICLE 36 — COMMUNICATION BETWEEN THE PARTIES

#### 36.1 Forms and means of communication — Electronic management

EU grants are managed fully electronically through the EU Funding & Tenders Portal ('Portal').

All communications must be made electronically through the Portal in accordance with the Portal Terms and Conditions and using the forms and templates provided there (except if explicitly instructed otherwise by the granting authority).

Communications must be made in writing and clearly identify the grant agreement (project number and acronym).

Communications must be made by persons authorised according to the Portal Terms and Conditions. For naming the authorised persons, each beneficiary must have designated — before the signature of this Agreement — a 'legal entity appointed representative (LEAR)'. The role and tasks of the LEAR are stipulated in their appointment letter (see Portal Terms and Conditions).

If the electronic exchange system is temporarily unavailable, instructions will be given on the Portal.

#### 36.2 Date of communication

The sending date for communications made through the Portal will be the date and time of sending, as indicated by the time logs.

The receiving date for communications made through the Portal will be the date and time the communication is accessed, as indicated by the time logs. Formal notifications that have not been accessed within 10 days after sending, will be considered to have been accessed (see Portal Terms and Conditions).

If a communication is exceptionally made on paper (by e-mail or postal service), general principles apply (i.e. date of sending/receipt). Formal notifications by registered post with proof of delivery will be considered to have been received either on the delivery date registered by the postal service or the deadline for collection at the post office.

If the electronic exchange system is temporarily unavailable, the sending party cannot be considered in breach of its obligation to send a communication within a specified deadline.

#### 36.3 Addresses for communication

The Portal can be accessed via the Europa website.

The address for paper communications to the granting authority (if exceptionally allowed) is the official mailing address indicated on its website.

For beneficiaries, it is the legal address specified in the Portal Participant Register.

[redacted]

## ARTICLE 37 — INTERPRETATION OF THE AGREEMENT

The provisions in the Data Sheet take precedence over the rest of the Terms and Conditions of the Agreement.

Annex 5 takes precedence over the Terms and Conditions.

The Terms and Conditions take precedence over the Annexes other than Annex 5.

Annex 2 takes precedence over Annex 1.

## ARTICLE 38 — CALCULATION OF PERIODS AND DEADLINES

In accordance with Regulation No 1182/71[19], periods expressed in days, months or years are calculated from the moment the triggering event occurs.

The day during which that event occurs is not considered as falling within the period.

'Days' means calendar days, not working days.

## ARTICLE 39 — AMENDMENTS

### 39.1 Conditions

The Agreement may be amended, unless the amendment entails changes to the Agreement which would call into question the decision awarding the grant or breach the principle of equal treatment of applicants.

Amendments may be requested by any of the parties.

### 39.2 Procedure

The party requesting an amendment must submit a request for amendment signed directly in the Portal Amendment tool.

The coordinator submits and receives requests for amendment on behalf of the beneficiaries (see Annex 3). If a change of coordinator is requested without its agreement, the submission must be done by another beneficiary (acting on behalf of the other beneficiaries).

The request for amendment must include:

- the reasons why
- the appropriate supporting documents and
- for a change of coordinator without its agreement: the opinion of the coordinator (or proof that this opinion has been requested in writing).

The granting authority may request additional information.

[19] Regulation (EEC, Euratom) No 1182/71 of the Council of 3 June 1971 determining the rules applicable to periods, dates and time-limits (OJ L 124, 8/6/1971, p. 1).

If the party receiving the request agrees, it must sign the amendment in the tool within 45 days of receiving notification (or any additional information the granting authority has requested). If it does not agree, it must formally notify its disagreement within the same deadline. The deadline may be extended, if necessary for the assessment of the request. If no notification is received within the deadline, the request is considered to have been rejected.

An amendment **enters into force** on the day of the signature of the receiving party.

An amendment **takes effect** on the date of entry into force or other date specified in the amendment.

## ARTICLE 40 — ACCESSION AND ADDITION OF NEW BENEFICIARIES

### 40.1 Accession of the beneficiaries mentioned in the Preamble

The beneficiaries which are not coordinator must accede to the grant by signing the accession form (see Annex 3) directly in the Portal Grant Preparation tool, within 30 days after the entry into force of the Agreement (see Article 44).

They will assume the rights and obligations under the Agreement with effect from the date of its entry into force (see Article 44).

If a beneficiary does not accede to the grant within the above deadline, the coordinator must — within 30 days — request an amendment (see Article 39) to terminate the beneficiary and make any changes necessary to ensure proper implementation of the action. This does not affect the granting authority's right to terminate the grant (see Article 32).

### 40.2 Addition of new beneficiaries

In justified cases, the beneficiaries may request the addition of a new beneficiary.

For this purpose, the coordinator must submit a request for amendment in accordance with Article 39. It must include an accession form (see Annex 3) signed by the new beneficiary directly in the Portal Amendment tool.

New beneficiaries will assume the rights and obligations under the Agreement with effect from the date of their accession specified in the accession form (see Annex 3).

Additions are also possible in mono-beneficiary grants.

## ARTICLE 41 — TRANSFER OF THE AGREEMENT

In justified cases, the beneficiary of a mono-beneficiary grant may request the transfer of the grant to a new beneficiary, provided that this would not call into question the decision awarding the grant or breach the principle of equal treatment of applicants.

The beneficiary must submit a request for **amendment** (see Article 39), with

- the reasons why
- the accession form (see Annex 3) signed by the new beneficiary directly in the Portal Amendment tool and

- additional supporting documents (if required by the granting authority).

The new beneficiary will assume the rights and obligations under the Agreement with effect from the date of accession specified in the accession form (see Annex 3).

## ARTICLE 42 — ASSIGNMENTS OF CLAIMS FOR PAYMENT AGAINST THE GRANTING AUTHORITY

The beneficiaries may not assign any of their claims for payment against the granting authority to any third party, except if expressly approved in writing by the granting authority on the basis of a reasoned, written request by the coordinator (on behalf of the beneficiary concerned).

If the granting authority has not accepted the assignment or if the terms of it are not observed, the assignment will have no effect on it.

In no circumstances will an assignment release the beneficiaries from their obligations towards the granting authority.

## ARTICLE 43 — APPLICABLE LAW AND SETTLEMENT OF DISPUTES

### 43.1 Applicable law

The Agreement is governed by the applicable EU law, supplemented if necessary by the law of Belgium.

Special rules may apply for beneficiaries which are international organisations (if any; see Data Sheet, Point 5).

### 43.2 Dispute settlement

If a dispute concerns the interpretation, application or validity of the Agreement, the parties must bring action before the EU General Court — or, on appeal, the EU Court of Justice — under Article 272 of the Treaty on the Functioning of the EU (TFEU).

For non-EU beneficiaries (if any), such disputes must be brought before the courts of Brussels, Belgium — unless an international agreement provides for the enforceability of EU court judgements.

For beneficiaries with arbitration as special dispute settlement forum (if any; see Data Sheet, Point 5), the dispute will — in the absence of an amicable settlement — be settled in accordance with the Rules for Arbitration published on the Portal.

If a dispute concerns administrative sanctions, offsetting or an enforceable decision under Article 299 TFEU (see Articles 22 and 34), the beneficiaries must bring action before the General Court — or, on appeal, the Court of Justice — under Article 263 TFEU.

For grants where the granting authority is an EU executive agency (see Preamble), actions against offsetting and enforceable decisions must be brought against the European Commission (not against the granting authority; see also Article 22).

## ARTICLE 44 — ENTRY INTO FORCE

[redacted]

The Agreement will enter into force on the day of signature by the granting authority or the coordinator, depending on which is later.

SIGNATURES

For the coordinator

[redacted]

For the granting authority

[redacted]

[redacted]

**ANNEX 1**

# Horizon Europe (HORIZON)

# Description of the action (DoA)

**Part A**

**Part B**

# DESCRIPTION OF THE ACTION (PART A)

## COVER PAGE

*Part A of the Description of the Action (DoA) must be completed directly on the Portal Grant Preparation screens.*

| **PROJECT**<br>*Grant Preparation (General Information screen) — Enter the info.* | |
|---|---|
| **Project number:** | 101131588 |
| **Project name:** | FOOD, HEALTH AND ENVIRONMENT RESEARCH INFRASTRUCTURES TO TACKLE EMERGING PRIORITIES |
| **Project acronym:** | FHERITALE |
| **Call:** | HORIZON-INFRA-2023-DEV-01 |
| **Topic:** | HORIZON-INFRA-2023-DEV-01-05 |
| **Type of action:** | HORIZON-CSA |
| **Service:** | REA/C/04 |
| **Project starting date:** | fixed date: 1 January 2024 |
| **Project duration:** | 36 months |

## TABLE OF CONTENTS

# PROJECT SUMMARY

**Project summary**

*Grant Preparation (General Information screen) — Provide an overall description of your project (including context and overall objectives, planned activities and main achievements, and expected results and impacts (on target groups, change procedures, capacities, innovation etc)). This summary should give readers a clear idea of what your project is about.*

*Use the project summary from your proposal.*

This proposal systematically addresses the development, provision, and integration of services, across the European Research Infrastructures (RIs) landscape, that the scientific community can use to investigate the effects on health and the environment that artificial materials (including plastics, micro-, nano-, and biotechnological materials) can have. Exposure to such materials may occur as a result of their intended use (e.g., food packaging) or at the end of their lifecycle (e.g. plastic wear). These services, which are relevant to several areas of important societal and economic impact, are expected to span multiple scales and disciplines, including high-quality metrology, structural biology, microbiology, and ecotoxicology.

The main output of this proposal will be a thorough overview of extant service offer by European RIs with respect to questions from state-of-the-art of scientific research in the aforementioned domains. FHERITALE will identify common strategies for the coordination and optimization of services at different RIs geared towards increasing the accessibility of relevant technologies. In parallel, it will identifty those service and technology gaps that are hampering high-impact research and preventing a timely assessment of the repercussions of new materials on health and the environment. These gaps constitute high-priority areas for future development. FHERITALE will design a coordination framework for the RIs to drive these key technological developments.

The technological focus of this application includes emerging areas of research for which international interest is rapidly growing. The interdisciplinary nature of the cluster of identified technologies will connect health, food, and environment research, constituting one of the first examples of practical application of the "One Health" approach. This coordination effort will also serve as a fertile ground for further interdisciplinary research among RIs from the H&F and other domains.

# LIST OF PARTICIPANTS

**PARTICIPANTS**

*Grant Preparation (Beneficiaries screen) — Enter the info.*

| Number | Role | Short name | Legal name | Country | PIC |
|---|---|---|---|---|---|
| 1 | COO | CIRMMP | CONSORZIO INTERUNIVERSITARIO RISONANZE MAGNETICHE DI METALLO PROTEINE | IT | 999516810 |
| 2 | BEN | INSTRUCT-ERIC | INSTRUCT-ERIC | UK | 910086981 |
| 3 | BEN | CSIC | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES | 999991722 |
| 4 | BEN | ENEA | AGENZIA NAZIONALE PER LE NUOVE TECNOLOGIE, L'ENERGIA E LO SVILUPPO ECONOMICO SOSTENIBILE | IT | 999988521 |
| 5 | BEN | IBA | INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE PENTRU BIORESURSE ALIMENTARE | RO | 963496442 |
| 6 | BEN | SCIENSANO | SCIENSANO | BE | 906160809 |
| 7 | BEN | AnaEE-ERIC | ANALYSIS AND EXPERIMENTATION ON ECOSYSTEMS ERIC | FR | 890060749 |

**PARTICIPANTS**

*Grant Preparation (Beneficiaries screen) — Enter the info.*

| Number | Role | Short name | Legal name | Country | PIC |
|---|---|---|---|---|---|
| 8 | BEN | MU | Masarykova univerzita | CZ | 999880657 |
| 9 | BEN | UU | UNIVERSITEIT UTRECHT | NL | 999985805 |

[redacted]

# LIST OF WORK PACKAGES

**Work packages**

*Grant Preparation (Work Packages screen) — Enter the info.*

| Work Package No | Work Package name | Lead Beneficiary | Effort (Person-Months) | Start Month | End Month | Deliverables |
|---|---|---|---|---|---|---|
| WP1 | Project management, dissemination and outreach RP1 | 1 - CIRMMP | 26.50 | 1 | 18 | D1.1 – Management Guidelines<br>D1.2 – Data Management Plan<br>D1.3 – Data Management Plan revision<br>D1.4 – Plan for dissemination and exploitation including communication<br>D1.5 – Report on dissemination and outreach activities (RP1)<br>D1.6 – First progress report and policy brief |
| WP2 | Project management, dissemination and outreach RP2 | 1 - CIRMMP | 27.50 | 19 | 36 | D2.1 – Data Management Plan - second revision<br>D2.2 – Report on dissemination and outreach activities (RP2)<br>D2.3 – Second progress report and policy brief |
| WP3 | Mapping available services | 8 - MU | 22.00 | 1 | 18 | D3.1 – Landscaping procedure guidelines<br>D3.2 – Cross-thematic landscape |
| WP4 | Definition of key thematic priorities | 7 - AnaEE-ERIC | 23.50 | 1 | 15 | D4.1 – White paper on key selected priorities |
| WP5 | Thematic landscape and gap analysis | 4 - ENEA | 21.00 | 14 | 30 | D5.1 – Categorization of services and technologies<br>D5.2 – Strategic technology and service needs |
| WP6 | Enabling selected priorities | 5 - IBA | 23.01 | 12 | 27 | D6.1 – Gap analysis and technology needs<br>D6.2 – Thematic Cluster definition |

**Work packages**

*Grant Preparation (Work Packages screen) — Enter the info.*

| Work Package No | Work Package name | Lead Beneficiary | Effort (Person-Months) | Start Month | End Month | Deliverables |
|---|---|---|---|---|---|---|
| WP7 | Strategies for technology development | 1 - CIRMMP | 32.00 | 19 | 36 | D7.1 – Roadmap for strategic technology development<br>D7.2 – Plan for concerted provision of services |
| WP8 | Long term engagement and coordinated actions | 2 - INSTRUCT-ERIC | 27.50 | 19 | 36 | D8.1 – Thematic map available<br>D8.2 – FHERITALE implementation strategy (white paper) |
| WP9 | Ethics requirements | 1 - CIRMMP | 0.00 | 1 | 36 | D9.1 – OEI - Requirement No. 1 |

[redacted]

## Work package WP1 – Project management, dissemination and outreach RP1

| Work Package Number | WP1 | Lead Beneficiary | 1. CIRMMP |
|---|---|---|---|
| Work Package Name | Project management, dissemination and outreach RP1 | | |
| Start Month | 1 | End Month | 18 |

| Objectives |
|---|
| - Coordinate the project in an effective and efficient way, ensuring that all objectives are addressed<br>- Manage communication within the consortium and with European Commission<br>- Promote the project results, developments, and upcoming opportunities to all stakeholders |

| Description |
|---|
| Task 1.1 - Project Management, coordination, and internal communication (Lead: CIRMMP – INSTRUCT IT)<br><br>The implementation of the activities planned for the 3 years of the FHERITALE project relies on an experienced managerial team ensuring that all objectives are addressed, timing reporting and risk management activities. To this end, the Coordinator CIRMMP (INSTRUCT IT) will work closely with the FHERITALE Project Manager to secure the overall objectives and proper implementation of activities, including reporting to the EC. As depicted in Fig.3 of section 3.1, the monitoring of progress of the project is supported by a Strategic Board, whose members include the Coordination Team and a representative for each of the four ESFRI landmarks/ projects participating to the consortium, whereas the General Assembly of all partners is the ultimate decision-making body.<br><br>Communication tools and procedures will be set in place to support the management tasks. Tools for administrative, contractual and day-to-day coordination will be established at the project start, including templates for the production of deliverables, presentations, and periodic reports to the EC will be gathered in the Management Guidelines (D1.1, M2), which will be presented and distributed to all partners. The Management Guidelines will also define risks and contingency plans, as well as impact indicators.<br><br>The Coordination Team will be in charge of drafting and revising the Data Management Plan (D1.2, M4; D1.3, M18) of the project, addressing the information and new knowledge generated during the project according to the FAIR principles. To this task it will count with the support of CSIC (INSTRUCT ES).<br><br>Meetings of the Strategic Board, will be arranged every 3 months, for keeping track of the advancement of the scheduled activities and implement mitigation actions in case of deviations.<br>WP leaders will promptly notify the Strategic Board of any deviations/delays.<br><br>External Advisors' input, represented by key stakeholders including representatives from relevant ESFRI H&F domain infrastructures, the JRC with their Nanobiotechnology laboratory, the new RIANA INFRA-SERV project offering support services for nanoscience and nanotechnology, as well as from other relevant networks will be actively sought. An External Advisors list including representatives of strategically related RIs, relevant ESFRI or other EC clusters will be kept updated. At least once per reporting period External Advisors, together with the work package leaders concerned with assembly of TNA services for relevant thematic user communities, will review the portfolio of proposed TNA services to be delivered to the different targeted thematic user communities by the respective FHERITALE research infrastructure partners. The external Ethics Advisor described under WP 9 will formally be part of the group of External Advisors.<br><br>The project kick-off meeting (MS1.1, M2) will bring together the principal investigators for all partners, as well as key scientific and managerial personnel and will be the occasion to finalize procedures for the optimal implementation of the tasks.<br>This task will further ensure the compliance with ethics principles, managing the relevant ethics issues to be monitored (e.g., human participants & personal data, see Part A), as well as compliance to DNSH, gender equality and IPR.<br><br>Task 1.2 Communication, dissemination and outreach (Lead INSTRUCT-ERIC)<br><br>This task manages outreach and communication activities of the FHERITALE project ensuring that all relevant stakeholders are reached with outcomes of the project. INSTRUCT-ERIC brings to this task its experiences from the RI-VIS project which developed communication materials and tools to increase the visibility of research infrastructures and aligned with the communication strategies of the participating infrastructures. The task foresees the implementation of |

a portfolio of activities to manage and monitor internal and external communication of FHERITALE to all stakeholders with the aim of explaining the ambition and objectives of the project in a consistent manner. The Strategic Board will coordinate the production of a plan for dissemination and exploitation including communication activities (D1.4, M6; D1.5, M18), project's brand and communication visuals.

A project website will be established to inform the general public about the goals and achievements of the project. The existing user bases and global collaborators of the European research infrastructures and consortium partners will be leveraged to reach the maximum visibility.

Outreach activities will involve specific events organized within the frame of the FHERITALE as well the active engagement in targeted third-party events of relevance to the project objectives. Relevant events include ICRI to reach the global research infrastructure community, activities organized by the ERIC Forum for internationalization as well as activities from the projects awarded to international collaboration in the present Horizon Europe call. Activities will adopt a hybrid model of working, with virtual, hybrid and physical events.
All consortium members will disseminate project results at events addressing the wider scientific community and the public and will actively engage in communication at conferences and meetings.

The research infrastructures participating in this proposal have ample experience in these activities. They are all directly or through their nodes/centres involved in a great number of the projects, both Horizon Europe and national programs, within the H&F domain, thus with a big capacity to engage with the research community at large.

## Work package WP2 – Project management, dissemination and outreach RP2

| **Work Package Number** | WP2 | **Lead Beneficiary** | 1. CIRMMP |
|---|---|---|---|
| **Work Package Name** | Project management, dissemination and outreach RP2 | | |
| **Start Month** | 19 | **End Month** | 36 |

| **Objectives** |
|---|
| - Coordinate the project in an effective and efficient way, ensuring that all objectives are addressed<br>- Manage communication within the consortium and with European Commission<br>- Promote the project results, developments, and upcoming opportunities to all stakeholders. |

| **Description** |
|---|
| WP2 concerns project management, dissemination and outreach in the second part of the project, from month 19 to month 36. The objectives are the same as those described in WP1 and activities will follow the same scheme.<br><br>Task 2.1 Project management (Lead: CIRMMP)<br><br>During the second reporting period particular attention will be devoted to the occurrence and/or risk of deviations, implementing mitigation actions. The project management activities include the periodic revision of the DMP (D2.1, M30)<br><br>Task 2.2 Communication, dissemination and outreach (Lead: INSTRUCT-ERIC)<br><br>Activities will be pursued following the plan defined in WP1 (D2.2, M36). Towards the end of the project, it will be organized a specific information campaign (MS2.1, M34) to publicize FHERITALE outcome. The information campaign will include the release of informative material, including a short video addressing the wider research community and public at large. |

## Work package WP3 – Mapping available services

| **Work Package Number** | WP3 | **Lead Beneficiary** | 8. MU |
|---|---|---|---|
| **Work Package Name** | Mapping available services | | |

[redacted]

| Start Month | 1 | End Month | 18 |
|---|---|---|---|

| Objectives |
|---|
| - Provide the European research community a comprehensive cross thematic landscape of actual available services currently in used for material-oriented research of key thematic priorities (WP4) |

| Description |
|---|
| Partners MU and UU, representing EIRENE RI, coordinate the implementation of landscaping activities and procedures, preparation of questionnaires, coordination with "sister projects" emerging from the call.<br><br>Task 3.1 Establishment of a strategy for an effective RI landscaping (Lead: MU)<br><br>High quality data collection and questionnaires are the key prerequisites for an effective RI landscape analysis that will provide a solid platform for understanding the current scientific needs (WP4/5) and enable the identification of the technologies and services gaps (WP5/6) on which strategies for sustainable development will be based (WP7/8). In the initial months of the project, we will prepare a comprehensive list of available services to study the impact of artificial materials on health, food and environment, dividing the core methodologies on the basis of the breadth and transversality of their application. Questionnaires will be created based on analysis and exchanges among the FHERITALE consortium.<br><br>The preparatory phase of the landscaping will be coordinated with other projects, including "sister projects": a shared methodology and approach on how to present the outcome of the landscaping would better contribute to a more effective landscape in Europe and the exploitation of resources made available by the RIs at the European level to the research community.<br><br>The task will deliver the strategy that will be used for data collection, including finalized questionnaires, and the subsequent analysis of the needs and gaps (D3.1 Landscaping procedure guidelines, M4).<br><br>Task 3.2 Cross thematic landscape and roadmapping (Lead: UU)<br><br>The questionnaires will be distributed to relevant European RIs to identify potential service domains and to gather the details on the core methodologies offered at each site. The collected data will cover services relevant across the broad spectrum of specific parameters (physical, chemical, in vitro, in vivo biological properties) allowing researchers to address challenges relevant to health, food, and environmental conditions and the overall impact of artificial materials on health. As a consequence, services will encompass several scales, from the molecular level all the way to ecosystems. This will provide a catalogue of the current state of services offered across European RIs (MS3.1, M12). This catalogue will be analyzed by the consortium, in cooperation with External Advisors in the light of the priorities devised in WP4, and a first draft of the thematic map of services will be created and made available. The publicly available map will be continuously updated and corrected based on the progression of the state-of-the-art (WP4) and input from the reference user community for each RI. This information will be used to populate a report on the available services (D3.2, M18) and will feed, together with the results from WP4 the subsequent work of matching and gap analysis (WP5/6). |

## Work package WP4 – Definition of key thematic priorities

| Work Package Number | WP4 | Lead Beneficiary | 7. AnaEE-ERIC |
|---|---|---|---|
| Work Package Name | Definition of key thematic priorities | | |
| Start Month | 1 | End Month | 15 |

| Objectives |
|---|
| - Overview of research impact of micro- and nano particles, and smaller chemicals derived from artificial materials in the OneHealth approach<br>- Definition of key thematic priorities for the thematic cluster |

| Description |
|---|
| The analysis of the offered services, as described in WP3, needs to be complemented with a comprehensive analysis of |

the state-of-the-art of the ongoing research that can be related to the impact of micro- and nanoparticles, and smaller chemicals deriving from artificial materials, as well as of the infrastructure development projects within a OneHealth approach. This analysis will form the basis for reaching common criteria for the prioritisation of thematic areas, which is the main objective of WP4 (propose the strategic technology needs of selected priorities).

Task 4.1 The OneHealth approach for micro-, nanoparticles and derived chemicals from artificial materials (Lead: AnaEE-ERIC)

Within this task a major effort is devoted to provide an overview of the literature related to the impact on health, food and environment, including soils, of particles and chemicals derived from artificial materials. The outcome of this survey will be compared to the key priorities identified at the European level, so as to guide the thematic prioritization (Task 4.2). The prioritization will also consider the areas that are in need of a rapid response with a short-term solution, versus a more long-term solution. This overview will also be instrumental to the identification of relevant stakeholders (including the existing users) to engage within the frame of Task 4.2. At the same time, it will also provide information on the relevant technologies currently existing within (WP3) and outside of the RI offer. A first list of thematic priorities will be made available (MS4.1, M8).

Task 4.2 Selection of key priorities (Lead: AnaEE-ERIC)

Where necessary a survey will be addressed to partner RIs, as well as internal (facilities, nodes, centres) and external stakeholders (other RIs, research community in general, policy makers). The responses will be included in the analysis of the results of Task 4.1 to prioritize critical research questions. To ensure the best concerted outcome, a 2-3 days "brainstorming groups retreat" will be organized by MU (EIRENE CZ) (MS4.2, M10). The participants will include partner representatives and key External Advisors. A report on the revision and publication of selected priorities will complete the work package (D4.1, M15)

## Work package WP5 – Thematic landscape and gap analysis

| **Work Package Number** | WP5 | **Lead Beneficiary** | 4. ENEA |
|---|---|---|---|
| **Work Package Name** | Thematic landscape and gap analysis | | |
| **Start Month** | 14 | **End Month** | 30 |

| **Objectives** |
|---|
| - Fostering translation into practice of the services and technologies that are matching the needs based on key priorities defined in WP4;<br>- Identifying strategic technology needs based on the key scientific challenges and policy priorities identified by WP4 |

| **Description** |
|---|
| The mapping of services of WP3 and the priority analysis performed in WP4 will be complemented by a desk-based analysis of the technology needs and a categorization and ranking according to the compatibility with the needs and the services' Technology Readiness Level by applying a top-down approach, thus providing a basis of the thematic landscape and gap analysis to be performed in WP6 by co-creation. WP6 work is coordinated by partners representing METROFOOD RI.<br><br>Task 5.1 Categorizing and ranking the level of compatibility of the existing services and technologies with the needs (Lead: IBA)<br><br>Based on key priorities defined by WP4, the existing services and technologies mapped in WP3 will be categorized into three categories:<br>a. those that are already fully compatible with the needs<br>b. those that exist but have a different focus and/or are not openly accessible to European researchers through RIs<br>c. those that are not ready to be used<br><br>A procedure for analysis of the adaptability of the services to the Technology Readiness Level (TRL) of the various emerging technologies, and their prospects for inclusion in the service to engage industrial stakeholders will be done. A report on categorization of existing services and technologies will be elaborated (D5.1, M16). |

Task 5.2 Identifying strategic technology needs (Lead: SCIENSANO)

Desk research will be carried out to perform an analysis of technology needs and priorities based on an in-depth examination of existing data, official documents, policy documents and the most up-to-dated scientific literature (top-down approach). This desk-based analysis will allow to make a review and inventory of technology needs related to the key scientific challenges and policy priorities identified by WP4. A comprehensive description of these needs will be envisaged. It will represent a basis to prepare the gap analysis of T6.1, which vice-versa, is based on co-creation approach (D5.2, M27).

## Work package WP6 – Enabling selected priorities

| **Work Package Number** | WP6 | **Lead Beneficiary** | 5. IBA |
|---|---|---|---|
| **Work Package Name** | Enabling selected priorities | | |
| **Start Month** | 12 | **End Month** | 27 |

| **Objectives** |
|---|
| - Identifying and ranking main gaps and strategic technology needs<br>- Mapping of actors and approaches with identification of thematic clusters of RIs in the landscape (Health and Food and cross-domain) |

| **Description** |
|---|
| METROFOOD partners coordinates the analysis of the strategic technology needs carried out in WP5 will be complemented with a comprehensive gap analysis and the definition of a thematic cluster of service categorized according to different criteria (e.g., technologies, disciplines, and the "One Health" approach), based on a co-creation approach. The activities of WP6 will provide a solid basis for WP7 and WP8.<br><br>Task 6.1: Gap analysis (Lead: ENEA)<br><br>Based on the mapping and categorization of existing services and technologies and the desk analysis of technology needs of WP5, a detailed gap analysis will be performed by consortium partners, the community of the RIs directly involved/represented in the consortium, representatives of other relevant RIs of the H&F domain and cross-domain (e.g., environment) and "sister projects", as well as stakeholders of the agrifood and health systems, including industries and technology developers. On-line surveys will be run, and 1 workshop and 1 focus group will be organized using the MIRO platform. As a result, emerging needs will be identified, comprehensively described, and prioritized according to importance/emergency and feasibility.<br><br>Task 6.2: Definition of the Thematic Cluster (Lead: IBA)<br><br>Criteria for clustering will be defined according to e.g., technologies, disciplines, and the "One Health" approach and applied to the needs identified in T6.1 thus starting the definition of a map of actors (i.e., RIs) and approaches (i.e., technological solutions, ready for translation or to be potentially translated in new services), leading to the definition the thematic cluster of (new) services. These criteria and the preliminary map created will be at first discussed during the focus group of Task 6.1 as a preliminary step (map-v1, M19) and, after improvement, presented to, assessed, and validated during a focus group meeting involving consortium partners, the community of the RIs directly involved/ represented in the consortium, representatives of other relevant RIs. This focus group will be held at M22, organized by IBA (MS6.2, M22). The map will be further refined according to the outcomes of the focus group meeting; then, a final version will be realized upon further discussion within an on-line workshop, and thematic clusters of RIs shaped by intersection. They will potentially involve any relevant RI inside and outside the FHERITALE consortium. The thematic clusters so defined, fitting with the technology needs, will represent a supportive tool for the definition of the Roadmap for future RI technology (WP7). Furthermore, this task will act in close connection also with WP8, providing the basic framework for the planning of coordinated services and actions; to this end, the map of actors both in its v1 (M19) and in its validated version (MS6.2) will be realized in collaboration with the WP8 Leader and T8.1 and T8.2 leaders, to better design it as a supportive tool. |

[redacted]

## Work package WP7 – Strategies for technology development

| Work Package Number | WP7 | Lead Beneficiary | 1. CIRMMP |
|---|---|---|---|
| Work Package Name | Strategies for technology development | | |
| Start Month | 19 | End Month | 36 |

| Objectives |
|---|
| - Defining a roadmap of service-oriented technology development<br>- Developing a framework for the coordination of service provision and development |

| Description |
|---|
| Input from WP5 and WP6, and coordination with WP8 will be the basis to design a strategy for the development of new technologies and services to meet the thematic cluster needs.<br><br>WP7 will be coordinated by Instruct-ERIC representatives CIRMMP and CSIC.<br>Task 7.1: Roadmap of service-oriented technology development (Lead: CIRMMP)<br><br>Based on the input from WP5 (MS5.2 - list of technology needs and their technology readiness) and from WP6 (Gap analysis and technology needs), this task will distinguish between essential technologies that, while not supplied as a strategic European level service, do not require development and technologies that are not yet ready to be translated into services (MS7.1 - Missing services). For the latter group of technologies, we will seek a qualitative evaluation of their development effort. The above information will allow this task to produce a roadmap of service-oriented technology development. The roadmap will directly link the desired services with the corresponding technology development needs (if any), so that development can be targeted towards releasing service-ready products. The roadmap will also incorporate strategic solutions towards the concerted development of technologies, so that there should be no duplication of effort nor of new service provision resulting from its implementation. The priorities set by WP4 will ensure that Task 7.1 will focus on a technology cluster suitable to tackle high-relevance and high-impact scientific questions, while taking into account also the technology readiness levels, and effort estimates mentioned above.<br><br>To address gaps identified through the analysis in WP6, we will identify opportunities to implement pilot projects. Such projects will assess how new technologies and/or combination or upgrading of available research support services may fill the gaps, towards the development of a more complete portfolio of services relevant to the needs of the research community.<br><br>Task 7.2: Plan for concerted provision of services (Lead: CSIC)<br><br>The aim of this task is to provide coordination in the provision of existing and newly developed services in order to enhance the visibility of the overall cluster of research opportunities provided by the European infrastructures as well as to highlight the synergies among services. One of the specific results of the plan will be the ability to leverage the specialization of the different extant services leading to the implementation of fully fledged pipelines for scientific as opposed to being stuck in a scenario of fragmented services.<br><br>The present task will be driven by the output of WP5 for the formulation of the plan, which will include the contribution of the newly developed services set out in Task 7.1 together with their timeline of development. In this way, the plan will be useful also to feed into WP8, by making available a medium- to long-term perspective for the implementation and improvement of services at the participating infrastructures.<br><br>In addition to the design of the service provision and taking into account that this project will not generated novel research data in itself, we will discuss a coordinated strategy for the management, handling, and storage to inform implementation by the participating RIs. This strategy will aim to sustain the accessibility of generated research data in the mid-term period by very diverse potential user groups. To this end, possible options will be explored with pertinent EU-level bodies, such as EOSC, EBI, etc., will be explored.<br>MS7.1: Overview of existing relevant technologies that are not yet available as a service to researchers (Missing services, M24) |

## Work package WP8 – Long term engagement and coordinated actions

| Work Package Number | WP8 | Lead Beneficiary | 2. INSTRUCT-ERIC |
|---|---|---|---|
| Work Package Name | Long term engagement and coordinated actions | | |
| Start Month | 19 | End Month | 36 |

| Objectives |
|---|
| - Identify the technological, scientific and societal needs of the broad communities represented by the participating ERICs.<br>- Engage with stakeholders, in particular users and related RIs, to translate their needs and their scientific interaction network into requirements for long-term engagement and action items for future calls.<br>- Provide input on identified needs to the Life Science RIs clusters, the ERIC-Forum and to the ESFRI representation in a coordinated manner. It will further identify the need of the beneficiaries on FAIR data and communicate these to the stakeholders in EOSC. |

| Description |
|---|
| Task 8.1 Coordination of service access (CSIC)<br><br>Task 8.1 will ensure the dissemination and awareness of the cluster of technologies identified by the FHERITALE activities to all the research communities within the ESFRI H&F domain and also from other domains. In particular, the thematic map of services created within WP3-7 will be made available to the users in Europe and beyond and officially launched at a public workshop with main key stakeholders (D8.1, M34).<br><br>The portfolio of services will be available on the Internet page/website of the project, with appropriate lasting links to respectively involved service providing research infrastructures. The information given will guide users with different levels of expertise to engage with the respective service providing research infrastructure(s) of interest. It will thus represent a single entry point from which users will be able to individuate and access needed services, and be redirected to the relevant RIs.<br><br>We will engage with RIs both within the domain and with stakeholders in other ESFRI domains collaborating with ESFRI and the ERIC Forum to ensure a synergistic approach. Where relevant, we will engage also with the European Science cloud (EOSC) and the Research Data Alliance (RDA) initiatives to keep abreast of current data practices. Additionally, the EOSC Forum provides an ideal, multi-disciplinary avenue to disseminate FHERITALE achievements.<br><br>Task 8.2 Coordinated implementation strategy (INSTRUCT-ERIC; strictly coordinated with WP7 activities)<br><br>ESFRI infrastructures within the H&F have worked coordinately in many different activities and projects. This task will ensure that the plan developed within WP7 is implemented in coordination with the Life Science community of Research Infrastructures (LSRI). Based on the results of WP3-WP7, we will summarize key findings on future coordination and budget requirements as well as long-term implementation strategy within a white paper. As part of the creation of this white paper, communication and distribution strategies will be discussed with the project board; the implementation of suitable working groups may be sought if deemed necessary. |

## Work package WP9 – Ethics requirements

| Work Package Number | WP9 | Lead Beneficiary | 1. CIRMMP |
|---|---|---|---|
| Work Package Name | Ethics requirements | | |
| Start Month | 1 | End Month | 36 |

| Objectives |
|---|
| The objective is to ensure compliance with the 'ethics requirements' set out in this work package. |

[redacted]

| Description |
| --- |
| This work package sets out the 'ethics requirements' that the project must comply with. |

[redacted]

# STAFF EFFORT

**Staff effort per participant**

*Grant Preparation (Work packages - Effort screen) — Enter the info.*

| Participant | WP1 | WP2 | WP3 | WP4 | WP5 | WP6 | WP7 | WP8 | WP9 | Total Person-Months |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 - CIRMMP | 8.50 | 8.50 | 1.00 | 2.50 | 1.00 | 2.50 | 9.00 | 1.00 | | 34.00 |
| 2 - INSTRUCT-ERIC | 3.00 | 3.50 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 8.00 | | 20.50 |
| 3 - CSIC | 2.00 | 2.00 | 2.00 | 3.50 | 2.00 | 0.01 | 3.00 | 3.00 | | 17.51 |
| 4 - ENEA | 2.50 | 2.50 | | | 2.00 | 4.00 | 5.00 | 4.00 | | 20.00 |
| 5 - IBA | 2.50 | 3.00 | 2.00 | 3.00 | 6.00 | 4.00 | 2.00 | 1.00 | | 23.50 |
| 6 - SCIENSANO | 1.50 | 1.50 | 2.00 | 2.50 | | 5.00 | 2.00 | 1.00 | | 15.50 |
| 7 - AnaEE-ERIC | 2.50 | 2.50 | 3.00 | 6.00 | 3.00 | 3.00 | 3.00 | 3.50 | | 26.50 |
| 8 - MU | 2.50 | 2.50 | 8.00 | 1.50 | 2.00 | 2.00 | 4.00 | 4.00 | | 26.50 |
| 9 - UU | 1.50 | 1.50 | 3.00 | 3.50 | 4.00 | 1.50 | 2.00 | 2.00 | | 19.00 |
| **Total Person-Months** | 26.50 | 27.50 | 22.00 | 23.50 | 21.00 | 23.01 | 32.00 | 27.50 | 0.00 | 203.01 |

[redacted]

# LIST OF DELIVERABLES

**Deliverables**

*Grant Preparation (Deliverables screen) — Enter the info.*

*The labels used mean:*

*Public — fully open (⚠ automatically posted online)*
*Sensitive — limited under the conditions of the Grant Agreement*
*EU classified —RESTREINT-UE/EU-RESTRICTED, CONFIDENTIEL-UE/EU-CONFIDENTIAL, SECRET-UE/EU-SECRET under Decision 2015/444*

| Deliverable No | Deliverable Name | Work Package No | Lead Beneficiary | Type | Dissemination Level | Due Date (month) |
|---|---|---|---|---|---|---|
| D1.1 | Management Guidelines | WP1 | 1 - CIRMMP | R — Document, report | PU - Public | 2 |
| D1.2 | Data Management Plan | WP1 | 3 - CSIC | DMP — Data Management Plan | PU - Public | 4 |
| D1.3 | Data Management Plan revision | WP1 | 3 - CSIC | DMP — Data Management Plan | PU - Public | 18 |
| D1.4 | Plan for dissemination and exploitation including communication | WP1 | 2 - INSTRUCT-ERIC | R — Document, report | PU - Public | 6 |
| D1.5 | Report on dissemination and outreach activities (RP1) | WP1 | 2 - INSTRUCT-ERIC | R — Document, report | PU - Public | 18 |
| D1.6 | First progress report and policy brief | WP1 | 1 - CIRMMP | R — Document, report | SEN - Sensitive | 18 |
| D2.1 | Data Management Plan - second revision | WP2 | 3 - CSIC | DMP — Data Management Plan | PU - Public | 30 |
| D2.2 | Report on dissemination and outreach activities (RP2) | WP2 | 2 - INSTRUCT-ERIC | R — Document, report | PU - Public | 36 |
| D2.3 | Second progress report and policy brief | WP2 | 1 - CIRMMP | R — Document, report | SEN - Sensitive | 36 |
| D3.1 | Landscaping procedure guidelines | WP3 | 8 - MU | R — Document, report | PU - Public | 4 |
| D3.2 | Cross-thematic landscape | WP3 | 9 - UU | R — Document, report | PU - Public | 18 |

[redacted]

**Deliverables**

*Grant Preparation (Deliverables screen) — Enter the info.*

*The labels used mean:*

*Public — fully open (⚠ automatically posted online)*
*Sensitive — limited under the conditions of the Grant Agreement*
*EU classified —RESTREINT-UE/EU-RESTRICTED, CONFIDENTIEL-UE/EU-CONFIDENTIAL, SECRET-UE/EU-SECRET under Decision 2015/444*

| Deliverable No | Deliverable Name | Work Package No | Lead Beneficiary | Type | Dissemination Level | Due Date (month) |
|---|---|---|---|---|---|---|
| D4.1 | White paper on key selected priorities | WP4 | 7 - AnaEE-ERIC | R — Document, report | PU - Public | 15 |
| D5.1 | Categorization of services and technologies | WP5 | 5 - IBA | R — Document, report | PU - Public | 16 |
| D5.2 | Strategic technology and service needs | WP5 | 6 - SCIENSANO | R — Document, report | PU - Public | 27 |
| D6.1 | Gap analysis and technology needs | WP6 | 4 - ENEA | R — Document, report | PU - Public | 22 |
| D6.2 | Thematic Cluster definition | WP6 | 5 - IBA | R — Document, report | PU - Public | 27 |
| D7.1 | Roadmap for strategic technology development | WP7 | 1 - CIRMMP | R — Document, report | PU - Public | 36 |
| D7.2 | Plan for concerted provision of services | WP7 | 3 - CSIC | R — Document, report | PU - Public | 33 |
| D8.1 | Thematic map available | WP8 | 1 - CIRMMP | DEC —Websites, patent filings, videos, etc | PU - Public | 34 |
| D8.2 | FHERITALE implementation strategy (white paper) | WP8 | 2 - INSTRUCT-ERIC | R — Document, report | PU - Public | 36 |
| D9.1 | OEI - Requirement No. 1 | WP9 | 1 - CIRMMP | ETHICS | SEN - Sensitive | 1 |

[redacted]

## Deliverable D1.1 – Management Guidelines

| Deliverable Number | D1.1 | Lead Beneficiary | 1. CIRMMP |
|---|---|---|---|
| Deliverable Name | Management Guidelines | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 2 | Work Package No | WP1 |

| Description |
|---|
| Management Guidelines |

## Deliverable D1.2 – Data Management Plan

| Deliverable Number | D1.2 | Lead Beneficiary | 3. CSIC |
|---|---|---|---|
| Deliverable Name | Data Management Plan | | |
| Type | DMP — Data Management Plan | Dissemination Level | PU - Public |
| Due Date (month) | 4 | Work Package No | WP1 |

| Description |
|---|
| Data Management Plan |

## Deliverable D1.3 – Data Management Plan revision

| Deliverable Number | D1.3 | Lead Beneficiary | 3. CSIC |
|---|---|---|---|
| Deliverable Name | Data Management Plan revision | | |
| Type | DMP — Data Management Plan | Dissemination Level | PU - Public |
| Due Date (month) | 18 | Work Package No | WP1 |

| Description |
|---|
| Data Management Plan |

## Deliverable D1.4 – Plan for dissemination and exploitation including communication

| Deliverable Number | D1.4 | Lead Beneficiary | 2. INSTRUCT-ERIC |
|---|---|---|---|
| Deliverable Name | Plan for dissemination and exploitation including communication | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 6 | Work Package No | WP1 |

| Description |
|---|
| Plan for dissemination and exploitation including communication |

[redacted]

## Deliverable D1.5 – Report on dissemination and outreach activities (RP1)

| Deliverable Number | D1.5 | Lead Beneficiary | 2. INSTRUCT-ERIC |
|---|---|---|---|
| Deliverable Name | Report on dissemination and outreach activities (RP1) | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 18 | Work Package No | WP1 |

| Description |
|---|
| Report on dissemination and outreach activities carried out in the first 18 months of the project and update of dissemination plan |

## Deliverable D1.6 – First progress report and policy brief

| Deliverable Number | D1.6 | Lead Beneficiary | 1. CIRMMP |
|---|---|---|---|
| Deliverable Name | First progress report and policy brief | | |
| Type | R — Document, report | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 18 | Work Package No | WP1 |

| Description |
|---|
| First progress report and policy brief |

## Deliverable D2.1 – Data Management Plan - second revision

| Deliverable Number | D2.1 | Lead Beneficiary | 3. CSIC |
|---|---|---|---|
| Deliverable Name | Data Management Plan - second revision | | |
| Type | DMP — Data Management Plan | Dissemination Level | PU - Public |
| Due Date (month) | 30 | Work Package No | WP2 |

| Description |
|---|
| Revision of the DMP |

## Deliverable D2.2 – Report on dissemination and outreach activities (RP2)

| Deliverable Number | D2.2 | Lead Beneficiary | 2. INSTRUCT-ERIC |
|---|---|---|---|
| Deliverable Name | Report on dissemination and outreach activities (RP2) | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 36 | Work Package No | WP2 |

| Description |
|---|
| Report on dissemination and outreach activities carried out in the second 18 months of the project |

[redacted]

## Deliverable D2.3 – Second progress report and policy brief

| Deliverable Number | D2.3 | Lead Beneficiary | 1. CIRMMP |
|---|---|---|---|
| Deliverable Name | Second progress report and policy brief | | |
| Type | R — Document, report | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 36 | Work Package No | WP2 |

| Description |
|---|
| Second progress report and policy brief |

## Deliverable D3.1 – Landscaping procedure guidelines

| Deliverable Number | D3.1 | Lead Beneficiary | 8. MU |
|---|---|---|---|
| Deliverable Name | Landscaping procedure guidelines | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 4 | Work Package No | WP3 |

| Description |
|---|
| Landscaping procedure guidelines |

## Deliverable D3.2 – Cross-thematic landscape

| Deliverable Number | D3.2 | Lead Beneficiary | 9. UU |
|---|---|---|---|
| Deliverable Name | Cross-thematic landscape | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 18 | Work Package No | WP3 |

| Description |
|---|
| Report on services available |

## Deliverable D4.1 – White paper on key selected priorities

| Deliverable Number | D4.1 | Lead Beneficiary | 7. AnaEE-ERIC |
|---|---|---|---|
| Deliverable Name | White paper on key selected priorities | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 15 | Work Package No | WP4 |

| Description |
|---|
| Public document on the key selected priorities |

[redacted]

## Deliverable D5.1 – Categorization of services and technologies

| Deliverable Number | D5.1 | Lead Beneficiary | 5. IBA |
|---|---|---|---|
| Deliverable Name | Categorization of services and technologies | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 16 | Work Package No | WP5 |

| Description |
|---|
| Report on the categorization of existing services and technologies with details on the procedure for analysis of the adaptability of the services to the TRL |

## Deliverable D5.2 – Strategic technology and service needs

| Deliverable Number | D5.2 | Lead Beneficiary | 6. SCIENSANO |
|---|---|---|---|
| Deliverable Name | Strategic technology and service needs | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 27 | Work Package No | WP5 |

| Description |
|---|
| Review and inventory of technology needs related to the key scientific challenges and policy priorities |

## Deliverable D6.1 – Gap analysis and technology needs

| Deliverable Number | D6.1 | Lead Beneficiary | 4. ENEA |
|---|---|---|---|
| Deliverable Name | Gap analysis and technology needs | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 22 | Work Package No | WP6 |

| Description |
|---|
| Report describing main emerging needs, prioritized according to importance/emergency and feasibility |

## Deliverable D6.2 – Thematic Cluster definition

| Deliverable Number | D6.2 | Lead Beneficiary | 5. IBA |
|---|---|---|---|
| Deliverable Name | Thematic Cluster definition | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 27 | Work Package No | WP6 |

| Description |
|---|
| Report on the definition of thematic clusters of RIs & services categorized according to technologies, disciplines, and the "One Health" |

[redacted]

## Deliverable D7.1 – Roadmap for strategic technology development

| Deliverable Number | D7.1 | Lead Beneficiary | 1. CIRMMP |
|---|---|---|---|
| Deliverable Name | Roadmap for strategic technology development | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 36 | Work Package No | WP7 |

| Description |
|---|
| Report on strategic solutions for the sustainability of the cluster and for the development needed to fill technology gaps |

## Deliverable D7.2 – Plan for concerted provision of services

| Deliverable Number | D7.2 | Lead Beneficiary | 3. CSIC |
|---|---|---|---|
| Deliverable Name | Plan for concerted provision of services | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 33 | Work Package No | WP7 |

| Description |
|---|
| Plan for concerted provision of services |

## Deliverable D8.1 – Thematic map available

| Deliverable Number | D8.1 | Lead Beneficiary | 1. CIRMMP |
|---|---|---|---|
| Deliverable Name | Thematic map available | | |
| Type | DEC —Websites, patent filings, videos, etc | Dissemination Level | PU - Public |
| Due Date (month) | 34 | Work Package No | WP8 |

| Description |
|---|
| A comprehensive map of services currently accessible publicly available to users |

## Deliverable D8.2 – FHERITALE implementation strategy (white paper)

| Deliverable Number | D8.2 | Lead Beneficiary | 2. INSTRUCT-ERIC |
|---|---|---|---|
| Deliverable Name | FHERITALE implementation strategy (white paper) | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 36 | Work Package No | WP8 |

| Description |
|---|
| Document reporting the FHERITALE coordinated implementation strategy |

[redacted]

## Deliverable D9.1 – OEI - Requirement No. 1

| Deliverable Number | D9.1 | Lead Beneficiary | 1. CIRMMP |
|---|---|---|---|
| Deliverable Name | OEI - Requirement No. 1 | | |
| Type | ETHICS | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 1 | Work Package No | WP9 |

| Description |
|---|
| Appointment of an independent external Ethics Advisor.<br>The project's Ethics Advisor has scientific background relevant to environmental and ethical aspects linked to microplastics and nanosafety. Given the public controversy concerning these issues, the Ethics Advisor will give due support to the project's dissemination efforts. The Ethics Advisor will also produce two reports on the project's approach to address "Public concerns related to microplastics and the safety of nanomaterials" as part of the project's two periodic reports. |

[redacted]

# LIST OF MILESTONES

**Milestones**

*Grant Preparation (Milestones screen) — Enter the info.*

| Milestone No | Milestone Name | Work Package No | Lead Beneficiary | Means of Verification | Due Date (month) |
|---|---|---|---|---|---|
| 1 | Project Kick-off | WP1 | 1-CIRMMP | Meeting organized | 2 |
| 2 | FHERITALE Information Campaign | WP2 | 2-INSTRUCT-ERIC | Informative material published | 34 |
| 3 | First catalogue providing valuable insights into the current state of research infrastructures and services | WP3 | 9-UU | Catalogue published | 12 |
| 4 | Summary of thematic priorities | WP4 | 7-AnaEE-ERIC | Document shared with the consortium members | 8 |
| 5 | Strategic retreat meeting | WP4 | 8-MU | Meeting organised | 10 |
| 6 | 1st draft of technologies/services currently used for research focusing on the key thematic priorities | WP5 | 6-SCIENSANO | Document shared with the consortium members and made available to WP6 | 14 |
| 7 | List of technology needs and their technology readiness | WP5 | 6-SCIENSANO | Document shared with the consortium members and made available to WP6 | 18 |
| 8 | Gap analysis procedures defined | WP6 | 4-ENEA | Procedures defined and distributed to the consortium | 16 |
| 9 | "Map & Thematic cluster" focus group and Map of actors and approaches validated | WP6 | 5-IBA | Workshop organized, map discussed and validated | 22 |
| 10 | Missing services | WP7 | 1-CIRMMP | Document shared with the consortium members | 24 |

[redacted]

# LIST OF CRITICAL RISKS

**Critical risks & risk management strategy**

*Grant Preparation (Critical Risks screen) — Enter the info.*

| Risk number | Description | Work Package No(s) | Proposed Mitigation Measures |
|---|---|---|---|
| 1 | Failure in effective management of the consortium (Low likelihood, high severity) | WP9, WP1, WP2, WP5, WP8, WP3, WP4, WP6, WP7 | Both the coordinator, and the partners have extensive experience in managing EU projects. Simple management structure with regular, standardized reporting. Provision of Management Guidelines |
| 2 | Failure to engage a critical mass of appropriate stakeholders (Low likelihood, high severity) | WP9, WP1, WP2, WP5, WP8, WP3, WP4, WP6, WP7 | The consortium has already identified specific stakeholder groups. Review of stakeholder lists. |
| 3 | Delay in recruiting/assigning suitably qualified personnel for the assigned effort (Low likelihood, medium severity) | WP9, WP1, WP2, WP5, WP8, WP3, WP4, WP6, WP7 | Monitoring of recruitments/tasks assignments by the project manager |
| 4 | Failure of a beneficiary to complete an assigned task (Low likelihood, medium severity) | WP9, WP1, WP2, WP5, WP8, WP3, WP4, WP6, WP7 | Following decision of the General Assembly, redistribution of tasks and needed resources and formalization of amendment if necessary |
| 5 | Reliance on other Work Packages for content (Medium likelihood, high severity) | WP5, WP8, WP6, WP7 | There is a high degree of WP interdependence in FHERITALE. Progresses will be monitored via 1) milestones 2) Strategic Board Meetings 3) topic-focused working groups |
| 6 | Impossibility to run meetings, workshops and events in presence due to sanitary restrictions or other crisis (Medium likelihood, low severity) | WP1, WP2, WP8, WP4, WP6 | Work from remotely. Meetings and events moved from in presence to online. |

[redacted]

# PROJECT REVIEWS

**Project Reviews**

*Grant Preparation (Reviews screen) — Enter the info.*

| Review No | Timing (month) | Location | Comments |
|---|---|---|---|
| RV1 | 21 | tbc | |

# Table of Contents

# Proposal template Part B: technical description

## FHERITALE – FOOD, HEALTH AND ENVIRONMENT RESEARCH INFRASTRUCTURES TO TACKLE EMERGING PRIORITIES

### 1. Excellence

### 1.1 Objectives

FHERITALE aims at creating a cluster of Research Infrastructures (RIs) within the ESFRI Health and Food (H&F) domain capable of providing services to leverage research in areas encompassing relevant - and interconnected - health, food, and environment aspects. Artificial materials, including plastics, micro-, nano- and biomaterials, have been identified as strategic by the European Commission. At the same time, it is important to understand the interaction of these materials with the living systems at wide over their full life-cycle, from production to degradation, including the release of the primary materials or secondary products from degradation (e.g. contaminants, gases, etc.) in the biosphere (soils, waters, atmosphere), and the possible "recycling" in life, from microorganisms to humans. For instance, the presence of micro- and nanoplastics (MNPs) is part of our everyday life and they find their way into our body through air, water, and the food we eat. Therefore, there is a growing interest in these issues, which have significant impacts on health, food and the environment, and it is not surprising that a number of projects addressing them have been recently funded. In parallel, cooperation among research projects is also emerging. [redacted]). Several research groups - and consortia thereof - are developing methods to assess the interactions between artificial materials with various forms of life, both when they do their intended work (e.g., medical devices) and when they are released into the biosphere as a result of their degradation (e.g. endocrine interferents, microplastics accumulation, etc.). On the other hand, RIs are contributing with the development of new and more sophisticated technologies, thus the possibility of optimizing them for research purposes in areas not previously explored is a tangible possibility.

In this context, an extensive coordination among ESFRI infrastructures does not currently exist, and a plan for providing as services the plethora of techniques that are being optimized is also missing. That is why Europe needs a new coordinated system of RIs as well as the identification of unmet needs in this field and of the measures to overcome them.

RIs from the H&F domain need to coordinate their actions to develop a coherent landscape of available services and promote the development of new technologies. The FHERITALE Consortium already encompasses a number of services with a key role in several high impact areas, such as to study the migration from food contact materials or the effects of the shelf life of food products, to study at the molecular level the effect of micro- and nanoplastics on health, or the deterioration of biocompatible materials used for medical devices such as stents. We expect that the involved services will span several scales, encompassing high-quality metrology, analytical chemistry, structural biology, microbiology, and ecotoxicology. The technological focus includes emerging areas of research of high societal impact and for which the international interest is growing at a fast pace. The interdisciplinary nature of the resulting cluster will connect Health, Environment and Food. This will be the first example, at least in the H&F domain, of a cluster for such interdisciplinary research with the "One Health" approach (https://www.who.int/health-topics/one-health#tab=tab_1). Additionally, this coordination effort will serve as a fertile ground for further inter- and trans-disciplinary research among the RIs of the H&F and other interconnected domains.

ESFRI Landmarks and ESFRI Projects that are part of this consortium have all long-term experience in Coordination Actions. The coordination of the planned activities builds on the outcomes of recent and/or current Horizon projects. Numerous recent actions have been implemented by clusters of RIs (EOSC-LIFE, RIVIS, CanSERV, just to mention a few). FHERITALE will adopt the best management procedure taking examples from such successful projects and will leverage on the expertise of each beneficiary. The activities of the FHERITALE consortium will primarily focus on services and technologies for studying material-life interactions that are made available by the ESFRI landscape capacities. Research and technologies related to the development of new micro-nano-materials do not fall within the scope of this coordination action.

**The overarching goal of FHERITALE is to set the ground for providing the European scientific community with easily accessible services at a single entry point (a one-stop shop) enabling the research community to study and analyze the impact of artificial materials (including plastics, micro-, nano- , and biotechnological**

**materials) on life, both directly and indirectly through the**

**To achieve this goal,** FHERITALE will focus on **5 specific objectives**:

**O1)** Provide the research community with a comprehensive cross-thematic landscape of currently available services relevant for addressing the challenges described in the project areas.

**O2)** Identify the priorities for providing a cluster of services that are well defined and with a clear scope to an interdisciplinary research community.

**O3)** Identify the service gaps and technological needs, as well as R&T priorities to tackle the high-relevant and high-impact scientific questions identified under O2

**O4)** Define the strategies for the long-term sustainability of the cluster of services and for the co-development of the required technologies

**O5)** Provide strategies for increasing service capacity for interdisciplinary research throughout the health, food, and environment fields.

### 1.2 Coordination and/or support measures and methodology

To further advance research on the effects of specific artificial materials (micro, nano plastics etc.) on health, food and environment, and considering the cross-sectoral nature of the scientific challenge, the participating RIs need to generate a map of suitable services selected from the many available ones. Such thematic and interdisciplinary map should report available services and their access routes, as well as provide information on the specific expertise available for them. At the same time this will be a guide for the users for exploiting at best RIs' resources. This may well involve tagging across different RIs. In parallel, we need to identify service gaps and technology implementation needs, and frame them in a long-term strategy for their development.

In light of the aforementioned objectives, we will carry out the following major activities:

*A1) Analysis of domain-wide and cross-domain service availability, readiness and versatility*

*A2) Analysis of thematic technology needs and service gaps*

*A3) Proposition of common long-term technology and service development strategies*

*A1) Analysis of domain-wide and cross-domain service readiness and versatility*
A comprehensive survey of the services and the technologies available within the H&F domain - as well as outside the domain (WP3) - will be one of the starting activities of the project. To this end, we will start the landscaping of the service readiness and versatility with a survey of the core methodologies of each of the RIs at the domain level, creating contacts with strategic RIs outside the domain. In this initial survey, we will be able to classify the core methodologies on the basis of the breadth and transversality of their application (e.g.: fully transversal as quantitative analytical techniques are; specific to interactions at the molecular level as structural biology techniques are; specific to interactions at the organism- or ecosystem-wide level as is ecotoxicology).
In parallel, we will critically analyze the state of the art with a survey of the scientific literature within the topic, to deepen the knowledge on the methodologies applied to study the impact of artificial materials on health, food and environment (WP4). In turn, this will allow us to reassess the transversality of the methodologies identified in the landscape (WP3), towards the realization of O1.

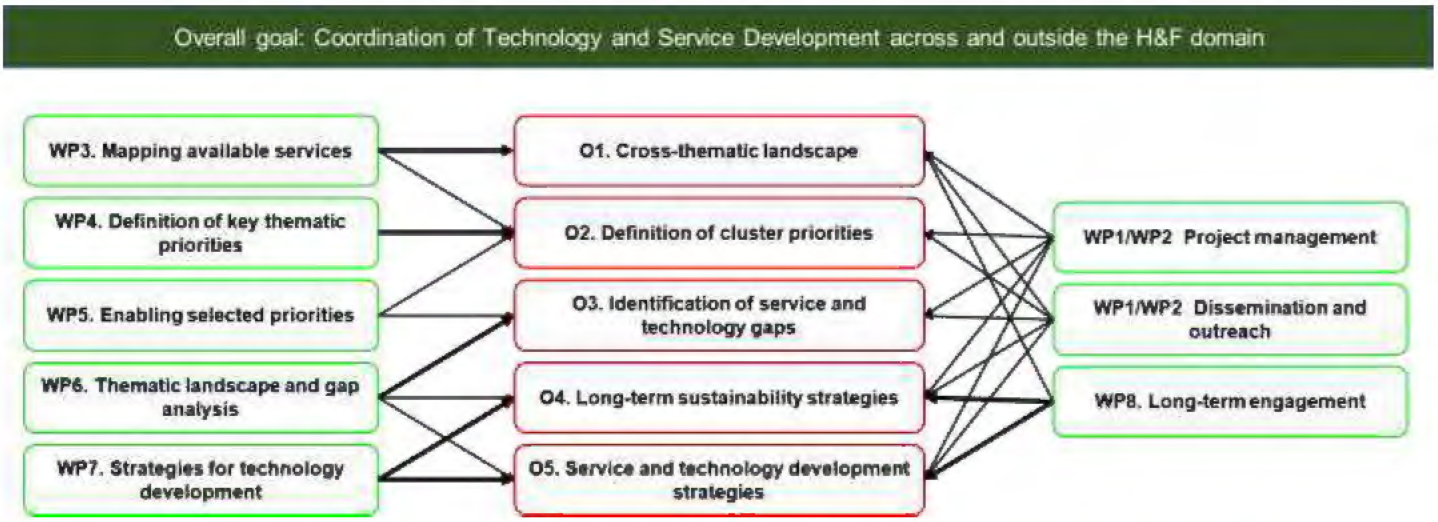
As the analysis of the state of the art ripens and evolves, the FHERITALE consortium will provide a more focused definition of the emerging scientific questions relevant for addressing the effects of artificial materials on health, food and on the environment (WP4), providing the relevant background for classifying services and technologies (WP5) and for the identification of the gaps (WP6), thereby fulfilling O2.*A2) Analysis of thematic technology needs and service gaps*
With this information at hand, we will match the existing services and technologies with the identified scientific priorities. The match between services and technologies on the one hand, and research needs on the other hand will first of all allow us (WP5) to classify the services and technologies between (a) those that are already fully compatible with the needs, (b) those that exist but have a different focus, (c) those that are not ripe for applications, and (d) those that are not yet existing. The analysis will include the adaptability of the services to the Technology Readiness Level (TRL) of the various emerging technologies.

However, the most important outcome of the match between [redacted] will be the contribution to the identification of the gaps (WP6), which will ultimately lead to the definition of R&T priorities (O3). In particular, starting from inputs arising from WP5, a "co-creation" approach will be applied in WP6 to build up a detailed map of the emerging needs, prioritized according to importance/emergency and certainty to be achieved, and a map of actors (RIs) and approaches, thus defining thematic clusters. Several actors will be engaged, covering: i) the consortium partners along with the communities of the RIs directly involved/represented in the consortium; ii) representatives of other relevant RIs of the H&F domain and cross-domain (e.g., Environment); iii) other projects approved within the present call ("sister projects"), and stakeholders of the agrifood and health system, including industries and technology developers. To activate all the actors, two workshops and two focus groups will be organized (WP6), and open consultation will be deployed trough live-surveys and polls (e.g., single, multiple choice, ranking, rating, word clouding, quizzes), interviews, live interactions and canvas for remote team working (e.g., whiteboards, post-its, diagrams, green/red, etc.).

*A3) Proposition of common long-term technology and service development strategies*

After having identified the technological needs raised by the strategic scientific questions, we need to define the strategies to fill the gaps (O4). This requires an extensive effort from the involved RIs as well as from RIs of the H&F and Environment domain to design a roadmap of technological developments that is coordinated and therefore more sustainable in the long term (O5), and that allows for reaching the objective of increasing the quality and the quantity of the services that are available to the growing community of scientists involved in research on the impact of artificial materials on health, food and environment.

The three major activities described above will be tackled through eight Work Packages, as detailed in Section 3. The relationship between the project objectives and each of the eight WPs is depicted in the following scheme, where the arrows' thickness indicates the relevance of the contribution of each WP to each objective.




The table below lists for each objective basis, the potential challenges that the proposed methodology might face while implementing the project activities.

**Table of risks towards the achievement of the FHERITALE's objectives**

| Objective | Challenges | Planned activities for mitigation |
|---|---|---|
| O1) provide the European research community with a comprehensive cross-thematic landscape of available services relative to the overall objective of the action | High fragmentation of the service offer | Coordination of technology development and service provision (WP7 and WP8) |
| | Low awareness of available services | Communication and community engagement (WP1-2 and WP8) |
| O2) Identify scientific priorities to provide an interdisciplinary research community with a cluster of services that are well defined | Many priorities can be identified | Reach criteria for prioritization (WP4-6), and interaction with stakeholders and within the consortium to steer the scopes. |
| | Extant services too narrowly focused | Focus areas are adjusted by close interaction with RIs (WP3, WP5 and WP6) |

| | | |
|---|---|---|
| and with a clear scope | | |
| O3) Identify the service gaps, the technological needs, and the R&T priorities to tackle highly relevant and high impact scientific questions | Technology needs are only coarsely known | Engagement of the community of potential users and industrial stakeholders (WP5 and WP6) |
| | Certain identified gaps are not addressed by currently available technologies | Roadmap of service-oriented technology development (WP7) |
| O4) Define strategies for long-term sustainability of the cluster of services and for co-development of technologies. | Lack of coordination between the research communities and relevant funding agencies | Formulation of policy documents intended for science policy makers and funding agencies, public outreach (WP4, WP6 and WP8).<br>Letter of interest to formalize RIs long-term commitment |
| O5) Provide strategies for increasing service capacity for interdisciplinary research among Health, Food and Environment RIs | Service capacity is currently insufficient to accommodate cross-domain research | Service capacity is increased in a concerted way (WP7 and WP8) |
| | RIs may not see advantages in coordination | Analysis of complementarity and possible synergies between RI's (WP3, WP5) and highlighting the positive impact of joint activities (WP7-8) |
| | Different RIs have different semantics, and therefore interoperability is complex | The mapping of available services and the evaluation of their readiness increases the awareness of the RIs and their reference communities. |

***Do No Significant Harm (DNSH)*** - The FHERITALE methodology complies with the DNSH principle (Art. 17, Reg. EU 2020/852). All the activities will run in full compliance with this principle, without affecting in any case neither climate, pollution, and biodiversity. Compliance with DNSH during the project lifespan will be ensured and monitored within WP1&WP2.

***Implementation of Open Science practices*** - FHERITALE will apply an approach based on the "science with and for society", implementing both Open Science practices and co-creation approaches during the whole project lifespan, in order to facilitate reaching its objectives and integrating its outcomes inside the RIs' community, the users' community and more widely the society. Open Science approaches will be applied by sharing and "making open" data and access to resources, as well as the methodologies applied and their evaluation and the impact, as demonstrated by the high number of public deliverables. To be aligned with the Open Science practices, the Horizon Europe guidelines (v2.0, April 2022) will be the reference, adopting early and open sharing of research (e.g., through preregistration, registered reports, pre-prints, or crowd-sourcing; e.g., Figshare, PeerJ, OSF Preprints, Zenodo). Project outputs (data, reports, publications, etc.) will be made available in Open Access repositories, either through preregistrations or through publications in Open repositories. The publications of the project (scientific review articles) will be published in Open Access Journals Repositories. Where appropriate, papers will be published using the newly established European Commission's Open Access publishing platform ORE. Open communication with the wide public and all relevant stakeholders about the project objectives, results, outcomes, and impact will in turn motivate the engagement by encouraging a multi-actor participation. Co-creation approaches will be applied with a wide variety of benefits to researchers, citizens, policy makers and the society and across the research and innovation cycle. Actions for the engagement of stakeholders will involve communication and raising awareness, co-design and co-development and co-implementation. Actions specifically focused on actively engaging the RIs' community and stakeholders are at the core of WP3, WP4 and WP6, which will apply several online tools and organize dedicated workshops and focus groups, thus favoring knowledge exchange and co-creation of new knowledge.

## 2. Impact

### 2.1 Project's pathways towards impact

*More comprehensive analysis of research infrastructure services available to European scientists;*

The impact of artificial materials on health (be it direct or through interactions with food and environment) poses several research questions of high impact. Just to name a few, the characterization of the materials, their interaction with biological components, the effect of wear and the end-of-life fate, as well as the interaction in vivo and in ecosystems. FHERITALE aims at providing the European research community with a comprehensive thematic map to identify the technologies and services, and their readiness and adaptability available for addressing all these questions (O1). Given that the above research questions cover a variety of levels (from the molecular level all the way to organisms and ecosystems), the map will include services covering the different levels of detail (e.g.: chemical analysis, advanced metrology, molecular biology, toxicology, organ and body imaging, marine biology, etc., and will therefore favor a highly interdisciplinary approach.

The methodologies to be used for the landscaping activity will be refined in coordination with the "sister projects".

*Better integration of the research infrastructure communities across the thematic areas*

The service available to users across the RIs at the pan-European level are highly fragmented and difficult to be described and categorized systematically. At the same time a clear scheme of key services is necessary for a multidisciplinary characterization of the effects of materials on health, food and environment. Therefore, the activity of implementing the thematic landscape (O1) is in itself a way to promote better integration and service coordination among RIs. In turn, this increases the capacity of RIs to inform their reference communities about services that are available within other RIs as well as to gather focused requests about missing services (O5).

*Analysis of technology needs and service gaps in European research infrastructures at the strategic level;*

The thematic landscape (O1) will not only provide an efficient tool for users to find the most suitable services (*vide infra*): its close evaluation with respect to the identified key priorities (O2) will also provide the grounds for the identification of emerging technological needs and highlight the actual gaps in service provision across the European RIs (O3). To this end, interactions, and coordination with already existing research projects in the field, as well as with their cluster (e.g.: CUSP), would be sought for. These interactions will also be strategic for both acquiring a complete picture of the technologies already developed in specific laboratories and for identifying the technologies that need to be implemented or de novo developed.

*More effective RI landscape in Europe;*

Revealing the service gaps in the current European RI landscape is critical for improving the effectiveness of the RI development.

*Increased capacity of European RIs to respond to emerging needs;*

At the time of writing this proposal, the consortium is expected to deal with a broad emerging topic, that is the impact of nano-, bio-materials, microplastics, and others that during their life cycle could become harmful to life in general (i.e. health, biosphere, and environment, including soil, ecosystems, etc.). However, it is not realistic to define a cluster of services that addresses such a broad range of topics. The FHERITALE project will thus define a list of key priorities, (echoing those identified by the EC) to provide a cluster of services that are well defined and with a clear scope (O2) and to design a technology development roadmap for RIs that can be both sustainable and flexible in the short-term as well as in the long-term for the evolution of the different emerging needs (O4).

*Common long-term strategies for development of technologies and services in pan-European Research Infrastructures;*

A concerted strategy at the level of RI consortia enabling a coordinated open access to services and in the development of technologies is required in order to avoid a scattered landscape. Within a new and very active research field, the emerging of several individual research projects can ultimately lead to a highly fragmented landscape of technologies that are not accessible to the wider community, and therefore do not serve the scope of potentiating the pan-European Research capability.

## 2.2 Measures to maximise impact - Dissemination, exploitation, and communication

FHERITALE sets up specific actions to maximize the impact of the project, presenting and promoting its outcomes to a broad audience, from the general public to the researchers' communities, the industrial R&D sector and policy

makers. This plan aims to: (a) Communicate the project results and overall outcome known and visible to the relevant stakeholders and the general public through a number of media and actions, (b) Disseminate the project's results, not only through the publication of results but also through social media, and (c) Exploit the results of the project for the research communities, the industrial stakeholders, all national or EU infrastructures and the policy makers. All the above actions will be a major focus of the FHERITALE project and are the result of a well-defined, four-step communication strategy that will: define the message, target the audience groups, select the appropriate tools/media for each target group, and plan the communication programme. This strategy has already been successfully applied by the partnership in other EU-funded research and Infrastructure programmes. Dissemination, exploitation, and communication activities are defined tasks detailed in WP1. The Plan for Dissemination and Exploitation of Results (PDER), including communication, will be firstly delivered at Month 6, and then periodically updated during the project lifetime, in alignment with the progress of the project. Several tools and approaches, combining physical, hybrid and online activities, will be applied to ensure the widest and most impactful dissemination, exploitation, and communication outcomes, starting from the analysis of the *what* (the message, content), *how* (the method of delivery of message/content and follow up), *who* (the target audience), *why* (the purpose) and *when* (the timing of the specific activities). Furthermore, to ensure success and achievement of the different communication, dissemination and exploitation actions, a variety of monitoring measures will be implemented, and KPIs defined, to indicate the effectiveness of the tools and the extent of penetration in the target audience.
The following tables summarize the main communication and dissemination channels.

***Communication channels***

| Tool/channel (WHAT) | Content (HOW) | Purpose (WHY) | Target (WHO) | Scheduling (WHEN) |
|---|---|---|---|---|
| Website | Project concept, structure, aims, achievements, opportunities | Raise awareness of the entire project and provide a contact portal | All* | M2, periodic updates |
| Social media accounts | Events and achievements, news, info on main topics | Provide up-to-the minute info on the project and relevant links | | M3, continuous updates |
| Communication toolkit (poster, roll-up, brochure, flyers) | Project concept, structure, aims and main achievements | Raise awareness | | From M6 |
| Infographics (n° 2+) | Specific key topics activities (e.g., micro-and nanoplastics; the thematic map) | Raise awareness | | From M4 |
| Press release (n° 2) | News, events, achievements | Provide a gateway to the project via mainstream media reaching a large audience | | M1, 34 |
| Participation to exhibitions, open days, public events | Project concept, structure, aims, main achievements | Showcase main achievements and potential | | From M2 |

* All (at different level of entrance according to the tool/channel) - general public/civil society; education & research (other RIs with their communities included); food businesses, entrepreneurs, ICT developers; partners; policy

makers; media; stakeholders; user community; etc.

***Dissemination channels***

| Tool/channel (WHAT) | Content (HOW) | Purpose (WHY) | Target (WHO) | Scheduling (WHEN) |
|---|---|---|---|---|
| Scientific publications (n° 3 review papers) | Project results | Raise awareness | Research community | From M18 |
| Participation to workshops/ conferences (n° 30+) | Project results | Raise awareness of results, promote exploitation | Other RIs, other relevant RIs and their community, industry | From M2 |
| Webinars | Main topics | Raise awareness and train | Scientific and technical communities, other relevant RIs and their communities, Industry | From M6 |
| Final event | Achievements, future opportunities | Project overview and achievements | Policy makers, other relevant RIs and their communities, research community, user community | M30 |
| Website | Project results and opportunities, link to publications | Project overview and achievements, raise awareness of results | Research community, other relevant RIs and their communities, industry, policy makers, consumers / citizens, user community | From M2 |

A common branding and visual identity for FHERITALE will be defined with a **logo and a common graphic line** (Month 2) to be used for all communication materials produced by the consortium (presentation and document templates, posters, email signature, virtual background, etc.) ensuring high recognition of the project. Such repeating themes and motifs will be replicated also across the project website, social media accounts, literature such as project flyers and brochures, and media items such as infographics and videos. A **communication toolkit** will be realized including **a brochure/leaflet, a poster, a roll-up, and 1 promotional video** following the guidelines and template set up by the project RI-VIS. This first set of materials will be developed in the first months of the project (M6) to be distributed through partners' networks and at relevant conferences and events, and translated as necessary by partners for local use, while the video will be realized by Month 30 (**KPI: distributed printed/downloaded promotional material).**

Main tools for on-line communication include first of all the project **website and social media accounts.** The website will be realized by M2 and then continuously updated providing information about the project concept, structure, aims, consortium, achievements, opportunities as well as news and main events organized or participated. Website analytics will be performed via Matomo. Social media accounts will be opened and used to share news on the project and reach a wide audience from the early months of the project (M3), using Facebook and/or Instagram more towards the general public and LinkedIn and/or Twitter more towards a professional audience (e.g. scientists, academics) (**KPI: n° of visits, posts, likes and interactions, followers**).

At least **three scientific review papers** are planned to be published in open access journals, which will provide a narrative overview of the results of the literature survey leading to the selection of key priorities (WP4) and of the major technological developments that are related to those (WP6), and a position paper on the coordinated implementation strategy (WP8) (**KPI: n° of papers published, citation index**).

Actions will be also taken with reference to **organization of and participation to events**. In particular, the following open events will be organized:

- participation in relevant community events in the thematic area
- organization of stakeholder events both in person and remotely to disseminate and coordinate the project output
- webinars which will make use of established webinar series by the partners of the consortium

Furthermore, all partners will participate in conferences and workshops (>30 to present the project and its results, addressed to different target audiences. They will include big conferences addressing the RIs' and scientific community dealing with the topic at the centre of the FHERITALE focus, such as ICRI, RAFA, IMEKOFOODS, European Biotech Week-EBW, as well as events (jointly) organized with the single RIs involved in FHERITALE and other RIs in the H&F domain, or with other EU/National projects funded under the same topic or the same destination. Furthermore, FHERITALE representatives will take part in events (e.g., industry fairs/ exhibitions) and conferences addressed to industry targeting the agrifood, biotech and new materials industry sector, as well as to open days and other public events addressed to the wide public and citizens. (**KPI: n° of events**

**organized/participated, n° of presentations, n° of participants**).
At least 2 **press releases** are planned at the beginning and the end of the project (M1, M30). They will provide a gateway to the project via mainstream media (newspapers, broadcast stations, and magazines), with reporters and editors as primary audience, and then enabling to reach a large audience by acting as multiplier campaign. The press releases will be also published on the project website.
In all cases, the FHERITALE logo will be showcased, with the proper acknowledgment to the EC funding according to the EC guidelines.

***Management of Intellectual Property*** - Intellectual Property (IP) monitoring and management within the Project will be undertaken under WP1&WP2. The Consortium Agreement will outline in detail the IP rules and the process for managing the knowledge produced by FHERITALE. Detailed regulations – notably for the management of Background and Foreground – will be established in the Consortium Agreement, which itself is subject to the terms of the model Grant Agreement.

## 2.3 Summary

[redacted]

### KEY ELEMENT OF THE IMPACT SECTION

| SPECIFIC NEEDS | EXPECTED RESULTS | D & E & C MEASURES |
|---|---|---|
| *What are the specific needs that triggered this project?* | *What do you expect to generate by the end of the project?* | *What dissemination, exploitation and communication measures will you apply to the results?* |
| Plastics, nano- and biomaterials, are artificial materials that have been identified as strategic by the EC. At the end of their life cycle, they can become pollutants with largely unknown effects on health, food and environment. Thus, there is a pressing need for research activities to assess how these materials behave when they do their intended work and when they are released into the biosphere.<br><br>To fulfil the above goals, the European scientific community needs to access a wide range of technologies at a single entry point (*a one-stop shop*). This would provide researchers with an interdisciplinary map of services, allowing them to fully exploit RIs resources.<br><br>An additional need in the present domain is to gain awareness of the existing service gaps that prevent the implementation of fully-fledged research pipelines available to the whole research community. | - map of existing services useful to investigate the impact of artificial materials on health, food and environment.<br>- analysis of domain-wide and cross-domain service readiness and versatility<br>- review of the scientific literature on the impact of plastics, nano- and biomaterials on health, food and environment, with interdisciplinary synthesis of methods and approaches<br>- overview of relevant technologies that are available but not provided to the users' community by a European RI as a service<br>- analysis of technology and service gaps that will require development in the future (i.e., beyond FHERITALE)<br>- plan for the coordinated implementation, optimization, and *de novo* development of the services associated with the cluster of technologies | - Dissemination through the network of European RIs in the food, health and environment sectors, and other national infrastructures<br>- Dissemination through communication with the representatives of other relevant European initiatives (e.g., EOSC Forum, RI clusters)<br>- Dissemination through domain-specific mailing lists<br>- Implementation of an online map of existing services and their relevance for research in the health and environment domain<br><br>- Project website<br>- Social media, using specific project channels next to the independent profiles of the partner facilities<br><br>Events:<br>3 main consortium and stakeholders' events<br>Participation to workshops/conferences/industry fairs/exhibitions/open days/public events (30+).<br>Participation in initiatives jointly organised with other EU/National projects.<br><br>Poster, roll-up, brochures, flyers<br>n°2+ Infographics<br>n°2 press releases<br>n°3 scientific review papers |

[redacted]

| TARGET GROUPS | OUTCOMES | IMPACTS |
|---|---|---|
| *Who will use or further up-take the results of the project? Who will benefit from the results of the project?*<br><br>- The research and academia community: scientists working at universities and research institutions (PhD students, early career researchers, and established research teams) will benefit from the comprehensive view on service provision resulting from the project to implement their activities,<br>- Research Infrastructures in the fields of food, health, food and environmental studies: they will be provided with a carefully designed plan for further development of their services and coordinated investment in new technologies.<br>- Private and public stakeholders, including EC, with interest in technology development: they can leverage the priorities set by the project for their future planning.<br>- Industry: Small and medium enterprise as well as large companies will benefit from the easier and more integrated availability of state-of-the-art technologies | *What change do you expect to see after successful dissemination and exploitation of project results to the target group(s)?*<br><br>- Increased level of knowledge and awareness about the impact of artificial materials on health and the environment<br>- comprehensive view of thematic technology needs and service gaps<br>- Enabling European researchers to successfully deploy state-of-the-art pipelines in the domain of interest<br>- Increased capacity of the RIs to inform their reference community about services provided and to deploy new services<br>- stronger connections and coordination among RIs<br>- Enhanced involvement of European service providers and RIs beyond the present partnership<br>- Long-term strategies for collaborative technology and service development adopted by the European RIs<br>- Improved capacity of the RIs' ecosystems | *What are the expected wider scientific, economic and societal effects of the project contributing to the expected impacts outlined in the respective destination in the work programme?*<br>Scientific:<br>- knowledge production, accumulation, and exchange<br>- mutual learning at the level of the RIs, research, academia, and the main stakeholders of the agrifood and health systems, including industries and technology developers<br>- added societal value through new services, new products and technologies, and new approaches that could contribute to solve the grand societal challenges supporting research applying the "One Health" approach<br>Technological:<br>- identification of main technological needs<br>- added value of RIs' services and Intellectual Property<br>- market creation and expansion<br>- corporate efficiency gains through identification of new potential services and technological solutions to be developed and transferred<br>Social and societal, including environmental:<br>- influence of R&D activities on main related societal challenges such as health, quality of life, environmental safety, sustainability of agrifood systems<br>- promotion of socially and environmentally sustainable development<br>- maintenance and increase of the health of citizens, animals, plants, and the environment for a better planet's quality and quality of life |

## 3. Quality and efficiency of the implementation

### 3.1 Work plan and resources

The FHERITALE workplan is arranged in eight closely connected Work Packages. Each WP comprises multiple tasks. The timing of the WPs and of their milestones and deliverables is shown in the Gantt diagram (Figure 1), whereas the interrelationships among WPs are shown in the diagram of Figure 2. Each work package has a Leader (WPL) and each Task has also been assigned a lead to streamline the organization of the work.

**Timing of the workpackages (GANTT)**

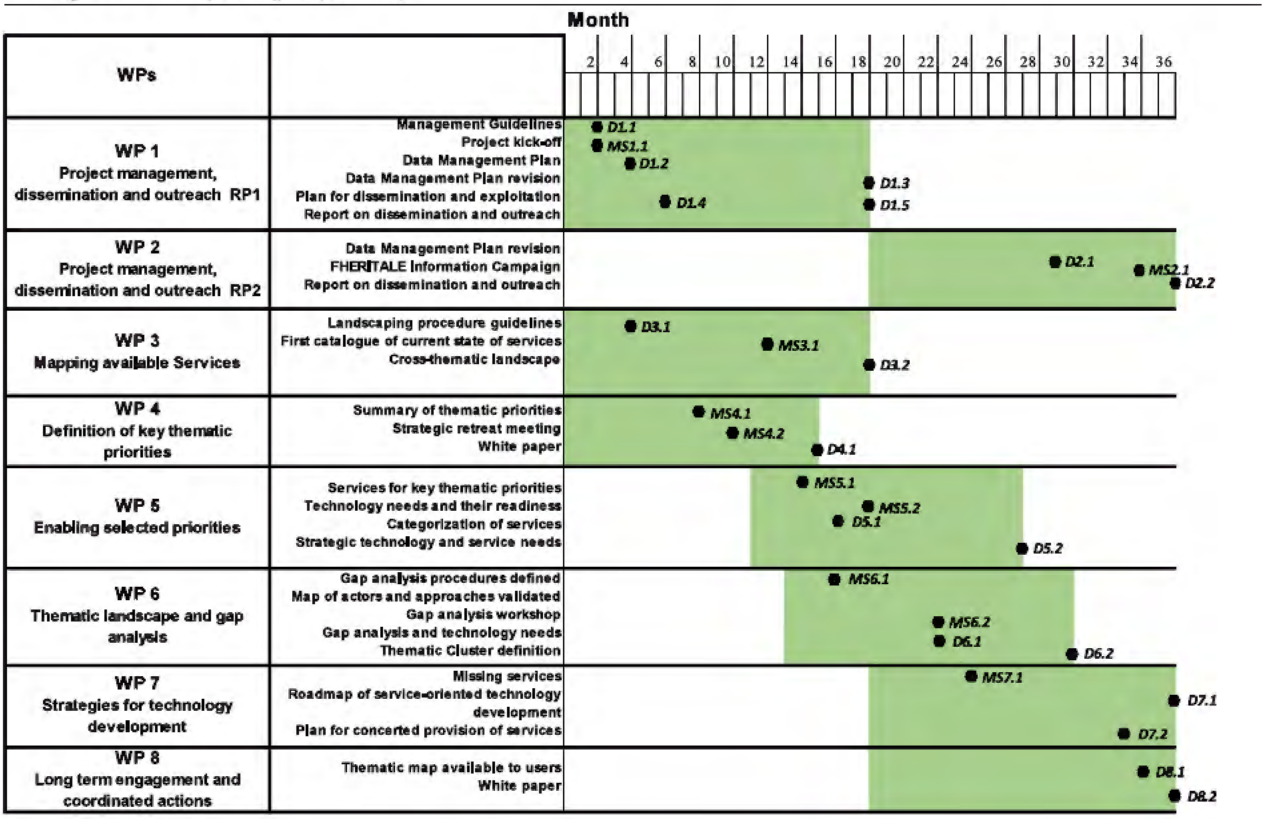



Figure 1: Gantt chart of the FHERITALE project

Taking into consideration the lump sum funding scheme of the project, and to avoid an excessive multiplication of work-packages, we opted to combine the management and the dissemination and outreach activities, typically having the whole project duration, and split them along two reporting periods.

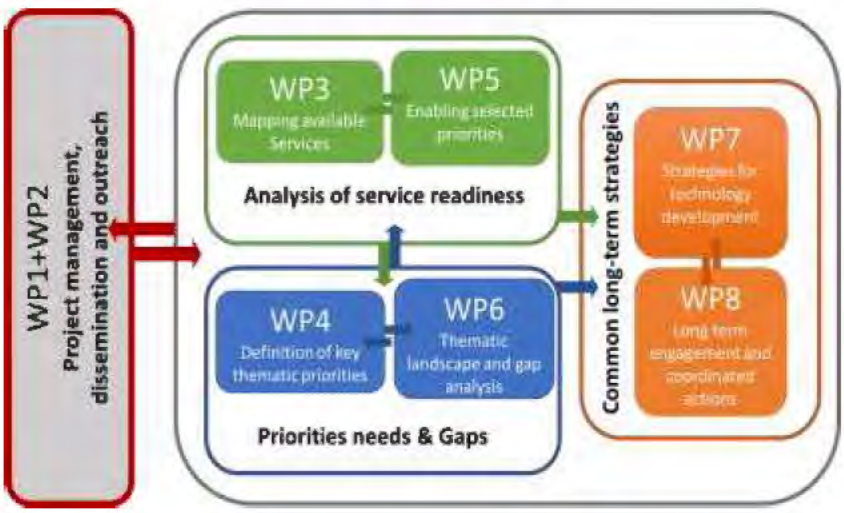



Figure 2: Interrelationships among the WPs of FHERITALE

The governance of FHERITALE (Figure 3) foresees a Coordination Team, composed by the Coordinator and the Project Manager, that manage and oversee the execution of the project. The Strategic Board, composed by the Coordination Team and one representative for each of the participating ESFRI RIs, receives periodic updates by the WP leaders.

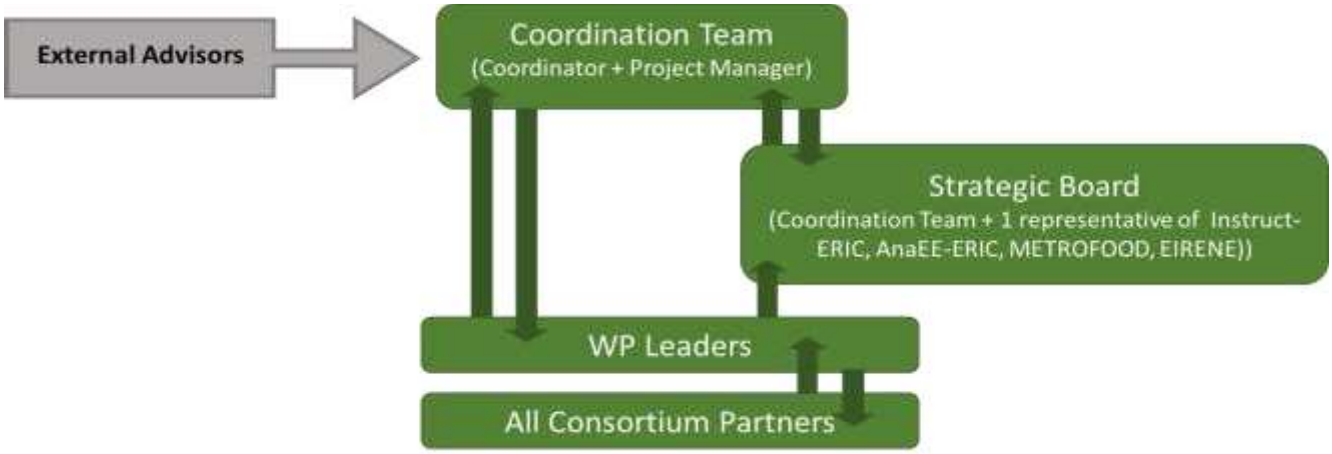



Figure 3: The governance of FHERITALE

### 3.2 Capacity of participants and consortium as a whole

The FHERITALE consortium consists of 12 participants, representing 4 world class research infrastructures which are either landmark or project in the ESFRI Roadmap 2021: Instruct-ERIC, METROFOOD-RI, AnaEE-ERIC and EIRENE, all part of the H&F ESFRI domain.

Within the Life Sciences, RIs have established closed interconnections over the past years but such interconnections have mainly involved the Health subdomain of the ESFRI H&F roadmap, or the Food/ecosystem subdomain. Given the interdisciplinary character of the scientific field of FHERITALE, the present consortium has been built to be able to provide the expertise and the capability needed for cross-domain coordination activities within the "OneHealth" approach: AnaEE-ERIC brings the expertise related to the release of artificial materials, notably nano-particles, impacts the soils, plants, and generally ecosystems, including agro-ecosystems; METROFOOD-RI on how this material is transferred to food, either directly (e.g. in packaging, during processing) or from primary production (crops); EIRENE how it is part of the exposome, and Instruct-ERIC can provide information on complex interactome in cells.

The consortium brings together expertise from both the Health subdomain (Instruct-ERIC and EIRENE) and the Food subdomain (AnaEE-ERIC and METROFOOD-RI). AnaEE-ERIC is also strongly related to environmental research, while EIRENE has an intrinsic interdisciplinary nature. Instruct-ERIC focuses on structural biology and cellular structural biology, while METROFOOD-RI focuses on metrology applied to the agrifood.

FHERITALE focuses on the landscaping of existing RI's and the identification of gaps and of needed future technological developments to maximize and harmonize the access provision and thus enabling the research community to deliver more comprehensive and impactful material-related research outcomes. The complementary nature of the mentioned RIs and FHERITALE emphasize the need for collaborative efforts and partnerships within the scientific community to advance knowledge and research discovery.

Besides having the expertise and the high-end instrumentation to study the interactions of biological macromolecules, Instruct-ERIC has a vast array of services that might be exploited to understand the cellular mechanisms that might occur with the exposure to nanoparticles from artificial materials and to the molecules that might be released from them, using a structural biology approach. Furthermore, Instruct-ERIC is actively participating in coordinated clusters, including the Life Science RIs [redacted] which brings together 13 infrastructures in the H&F domain, and the ERIC Forum, thus ensuring that the FHERITALE overall strategy works in synergy with other existing initiatives. EIRENE, also through the participation in the AURORA project (https://auroraresearch.eu/), brings together experts along the complete knowledge chain, from the production of plastics, the characterization of plastics and their associated chemicals, all the way to quantifying the impact of nano-particles and chemicals on

health, which is then complemented by the Instruct-ERIC st

Thanks to its network of about 60 platforms featuring the main continental ecosystem types (e.g., peatland, agro-ecosystems, wetland, rivers and lakes, dryland, forests, etc.), across Europe (including overseas) climates, AnaEE-ERIC can study the transfer of nano-material in soils and plants, and, thanks to its experimental capacity to apply manipulations on ecosystems (e.g., heating, droughts, soil amendments, extreme events, etc.) the dynamics of these transfers can be studied under anthropic induced changes in climate, biodiversity loss, or management of the ecosystems.

METROFOOD-RI involves expertise and state-of-the-art facilities addressed to provide high-quality metrology services in food and nutrition, comprising an important cross-section of highly interdisciplinary and interconnected fields throughout the food value chain, including agrifood, sustainable development, food safety, quality, traceability and authenticity, environmental safety, and human health. Therefore, specifically for the project, METROFOOD-RI can cover aspects related to development and characterization of new materials, characterization of micro- and nanoparticles, application of biotechnologies to food production and the evaluation of the effects on food quality and safety.

AnaEE-ERIC coordinates AgroSERV, a Horizon Europe INFRA-SERV project (GA 101058020) that gathers 12 research infrastructure partners, including METROFOOD-RI, and 61 additional partners as service providers to support research and innovation by providing customized and integrated RI services for a sustainable and resilient agriculture and supporting agroecological transitions. Bringing together such a large consortium of RIs, most of them being on the ESFRI roadmap, the project represents a good space of collaboration and integration with FHERITALE.

Therefore, the interdisciplinary consortium involved in this proposal is coherent and highly complementary in terms of expertise, missions, and tools.

The FHERITALE consortium provides the needed capacity for a successful implementation of the project. The consortium, through the international collaboration of its members, has the capability of deploying all planned activities, as well as of implementing an effective communication strategy.
All partners are highly experienced in the dissemination and communication of scientific and technological output and impact, engaging the academic community, funding agencies, industrial stakeholders and the general public. All partners have a longstanding history of collaborations and joint activities through large scale European projects. The commitment of this consortium will be strengthened via the activities throughout the whole project.

## 4. Ethics self-assessment

### 4.1 Ethical dimension of the objectives, methodology and likely impact

The objective of this proposal is to perform a thematic landscape and gap analysis of services and technologies available to the European research community in order to investigate the effects that plastics, micro-, nano-, and biotechnological material shave on health and environment. In order to do this, it is planned during the project's lifespan to conduct, at the European level, some survey on service provision, questionnaires, focus groups, and co-creation, which imply of personal data (names, contact details, attendance records). In compliance with the Art.9 of the GDPR, personal data will not include sensitive personal data.

GDPR regulations will be met for all data recorded.

### 4.2 Compliance with ethical principles and relevant legislations

No potential ethical issues are expected, because the project does not entail sample handling nor the execution of experiments. The project activities do not have relevant gender and diversity aspects. Personal data will be collected, stored, processed, retained (and eventually destroyed) in compliance with data protection acts, legislation, and directives, at both the European and the National level.

## 5. Key performance indicators

The Monitoring of the progress of the project will be facilitated the key performance indicators (KPIs) listed below.

- WP1 and WP2: Number of representatives of related RIs participating to strategy meetings and focused groups

- WP1 and WP2:  Social media communication: n° o
- WP1 and WP2: Number of distributed printed/downloaded promotional material
- WP1 and WP2: n° of papers published, citation index
- WP3: Number of services included in the service catalogue
- WP4: Number of individuated thematic areas
- WP5: Number of key thematic priorities selected for the thematic cluster
- WP6: Number of identified service gaps
- WP7: Number of services selected for the thematic map
- WP8: Number of RIs committed for long term maintenance of the thematic map of services
- All WPs: Number of meetings/workshops organized

| History of Changes | | |
|---|---|---|
| Version | Date | Change |
| 1.0 | 27.07.2023 | Partners short name replaced with the ones usually adopted by each institution in EU projects |
| 1.0 | 27.07.2023 | Part B, objectives: one sentence added to better clarify the scientific focus of the project |
| 1.0 | 27.07.2023 | Part B: section 5. Key performance indicators added |
| 1.0 | 27.07.2023 | WP1: one sentence added to better clarify the composition and role of the External Advisors |
| 1.0 | 27.07.2023 | Schemes of workflows included in the descriptions of WPs 3-6 deleted |
| 1.0 | 27.07.2023 | Task 7.1: One sentence added about the possibility of identifying some pilot projects if relevant for the WP7 outcome |
| 1.0 | 27.07.2023 | Task 7.2: one sentence added to better describe the activity aiming at a coordinated strategy for data management. |
| 1.0 | 27.07.2023 | Task 8.1 – One sentence added to better clarify the activities related to long-term service map accessibility. |
| 1.1 | 03.08.2023 | Added D1.6 - First progress report and policy brief (EC request) |
| 1.1 | 03.08.2023 | Added D2.3 - Second progress report and policy brief (EC request) |
| 1.1 | 03.08.2023 | A total of 2PM (1,5 PM for Partner 1 and 0,5 for Partner 2) effort have been shifted from WP1 to WP7 |
| 1.1 | 03.08.2023 | A total of 2PM (1,5 PM for Partner 1 and 0,5 for Partner 2) effort have been shifted from WP2 to WP7 |
| 1.1 | 03.08.2023 | Added WP9 Ethics requirements (EC request) |
| 1.1 | 03.08.2023 | Added D9.1 - OEI - Requirement No. 1 (EC request) |

[redacted]

**ANNEX 2**

# ESTIMATED BUDGET (LUMP SUM BREAKDOWN) FOR THE ACTION

| | Estimated EU contribution | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Estimated eligible lump sum contributions (per work package) | | | | | | | | | Maximum grant amount[1] |
| | WP1 Project management, dissemination and outreach RP1 | WP2 Project management, dissemination and outreach RP2 | WP3 Mapping available services | WP4 Definition of key thematic priorities | WP5 Thematic landscape and gap analysis | WP6 Enabling selected priorities | WP7 Strategies for technology development | WP8 Long term engagement and coordinated actions | WP9 Ethics requirements | |
| **Forms of funding** | Lump sum contribution | Lump sum contribution | Lump sum contribution | Lump sum contribution | Lump sum contribution | Lump sum contribution | Lump sum contribution | Lump sum contribution | Lump sum contribution | |
| | a | b | c | d | e | f | g | h | i | j = a + b + c + d + e + f + g + h + i |
| **1 - CIRMMP** | 96 875.00 | 65 625.00 | 6 125.00 | 19 375.00 | 6 125.00 | 19 375.00 | 44 125.00 | 10 500.00 | 0.00 | 268 125.00 |
| **2 - INSTRUCT-ERIC** | 45 592.02 | 73 202.02 | 10 720.00 | 14 470.00 | 10 720.00 | 14 470.00 | 11 774.37 | 96 814.37 | 0.00 | 277 762.78 |
| **3 - CSIC** | 16 197.50 | 16 197.50 | 13 643.75 | 23 566.88 | 10 920.00 | 3 750.00 | 20 519.38 | 77 323.13 | 0.00 | 182 118.14 |
| **4 - ENEA** | 23 081.88 | 23 081.88 | 0.00 | 0.00 | 16 196.23 | 36 142.50 | 38 663.75 | 36 142.50 | 0.00 | 173 308.74 |
| **5 - IBA** | 14 125.00 | 16 125.00 | 10 000.00 | 17 750.00 | 90 125.00 | 74 250.00 | 11 250.00 | 9 375.00 | 0.00 | 243 000.00 |
| **6 - SCIENSANO** | 13 562.50 | 11 062.49 | 17 250.00 | 24 750.00 | 0.00 | 34 500.00 | 25 000.00 | 16 250.00 | 0.00 | 142 374.99 |
| **7 - AnaEE-ERIC** | 29 500.00 | 29 500.00 | 24 500.00 | 68 000.00 | 24 500.00 | 32 000.00 | 32 000.00 | 40 500.00 | 0.00 | 280 500.00 |
| **8 - MU** | 20 500.00 | 20 500.00 | 44 375.00 | 69 500.00 | 8 750.00 | 23 000.00 | 23 250.00 | 27 000.00 | 0.00 | 236 875.00 |
| **9 - UU** | 14 687.50 | 14 687.50 | 31 250.00 | 35 625.00 | 32 500.00 | 19 375.00 | 23 125.00 | 26 875.00 | 0.00 | 198 125.00 |
| **Σ consortium** | 274 121.40 | 269 981.39 | 157 863.75 | 273 036.88 | 199 836.23 | 256 862.50 | 229 707.50 | 340 780.00 | 0.00 | 2 002 189.65 |

[1] The 'maximum grant amount' is the maximum grant amount fixed in the grant agreement (on the basis of the sum of the beneficiaries' lump sum shares for the work packages).

[redacted]

**ANNEX 3**

# ACCESSION FORM FOR BENEFICIARIES

**INSTRUCT-ERIC (INSTRUCT-ERIC)**, PIC 910086981, established in OXFORD HOUSE, PARKWAY COURT, JOHN SMITH DRIVE, OXFORD OX4 2JY, United Kingdom,

**hereby agrees**

**to become beneficiary**

**in Agreement No 101131588 — FHERITALE** ('the Agreement')

**between** CONSORZIO INTERUNIVERSITARIO RISONANZE MAGNETICHE DI METALLO PROTEINE (CIRMMP) **and** the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

[redacted]

[redacted]

**ANNEX 3**

## ACCESSION FORM FOR BENEFICIARIES

**AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (CSIC)**, PIC 999991722, established in CALLE SERRANO 117, MADRID 28006, Spain,

**hereby agrees**

**to become beneficiary**

**in Agreement No 101131588 — FHERITALE** ('the Agreement')

**between** CONSORZIO INTERUNIVERSITARIO RISONANZE MAGNETICHE DI METALLO PROTEINE (CIRMMP) **and** the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

[redacted]

[redacted]

**ANNEX 3**

## ACCESSION FORM FOR BENEFICIARIES

**AGENZIA NAZIONALE PER LE NUOVE TECNOLOGIE, L'ENERGIA E LO SVILUPPO ECONOMICO SOSTENIBILE (ENEA)**, PIC 999988521, established in LUNGOTEVERE GRANDE AMMIRAGLIO THAON DI REVEL 76, ROMA 00196, Italy,

**hereby agrees**

**to become beneficiary**

**in Agreement No 101131588 — FHERITALE** ('the Agreement')

**between** CONSORZIO INTERUNIVERSITARIO RISONANZE MAGNETICHE DI METALLO PROTEINE (CIRMMP) **and** the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

[redacted]

[redacted]

**ANNEX 3**

## ACCESSION FORM FOR BENEFICIARIES

**INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE PENTRU BIORESURSE ALIMENTARE (IBA)**, PIC 963496442, established in STR DINU VINTILA NR 6 SECTOR 2, BUCURESTI 021102, Romania,

**hereby agrees**

**to become beneficiary**

**in Agreement No 101131588 — FHERITALE** ('the Agreement')

**between** CONSORZIO INTERUNIVERSITARIO RISONANZE MAGNETICHE DI METALLO PROTEINE (CIRMMP) **and** the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

[redacted]

[redacted]

**ANNEX 3**

## ACCESSION FORM FOR BENEFICIARIES

**SCIENSANO (SCIENSANO)**, PIC 906160809, established in JULIETTE WYTSMANSTRAAT 14, ELSENE 1050, Belgium,

**hereby agrees**

**to become beneficiary**

**in Agreement No 101131588 — FHERITALE** ('the Agreement')

**between** CONSORZIO INTERUNIVERSITARIO RISONANZE MAGNETICHE DI METALLO PROTEINE (CIRMMP) **and** the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

[redacted]

[redacted]

**ANNEX 3**

## ACCESSION FORM FOR BENEFICIARIES

**ANALYSIS AND EXPERIMENTATION ON ECOSYSTEMS ERIC (AnaEE-ERIC)**, PIC 890060749, established in 1 AVENUE DE LA TERRASSE, GIF SUR YVETTE 91190, France,

**hereby agrees**

**to become beneficiary**

**in Agreement No 101131588 — FHERITALE** ('the Agreement')

**between** CONSORZIO INTERUNIVERSITARIO RISONANZE MAGNETICHE DI METALLO PROTEINE (CIRMMP) **and** the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

[redacted]

[redacted]

**ANNEX 3**

## ACCESSION FORM FOR BENEFICIARIES

**Masarykova univerzita (MU)**, PIC 999880657, established in Zerotinovo namesti 9, BRNO 601 77, Czechia,

**hereby agrees**

**to become beneficiary**

**in Agreement No 101131588 — FHERITALE** ('the Agreement')

**between** CONSORZIO INTERUNIVERSITARIO RISONANZE MAGNETICHE DI METALLO PROTEINE (CIRMMP) **and** the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

[redacted]

[redacted]

**ANNEX 3**

## ACCESSION FORM FOR BENEFICIARIES

**UNIVERSITEIT UTRECHT (UU)**, PIC 999985805, established in HEIDELBERGLAAN 8, UTRECHT 3584 CS, Netherlands,

**hereby agrees**

**to become beneficiary**

**in Agreement No 101131588 — FHERITALE** ('the Agreement')

**between** CONSORZIO INTERUNIVERSITARIO RISONANZE MAGNETICHE DI METALLO PROTEINE (CIRMMP) **and** the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

[redacted]

[redacted]

## FINANCIAL STATEMENT FOR THE ACTION FOR REPORTING PERIOD [NUMBER]

| | EU contribution | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Eligible lump sum contributions (per work package) | | | | | | | | | | | Requested EU contribution |
| | WP1 [name] | WP2 [name] | WP3 [name] | WP4 [name] | WP5 [name] | WP6 [name] | WP7 [name] | WP8 [name] | WP9 [name] | WP10 [name] | WP [XX] | |
| Forms of funding | / Lump sum contribution/ / Financing not linked to costs/ | / Lump sum contribution/ / Financing not linked to costs/ | / Lump sum contribution/ / Financing not linked to costs/ | / Lump sum contribution/ / Financing not linked to costs/ | / Lump sum contribution/ / Financing not linked to costs/ | / Lump sum contribution/ / Financing not linked to costs/ | / Lump sum contribution/ / Financing not linked to costs/ | / Lump sum contribution/ / Financing not linked to costs/ | / Lump sum contribution/ / Financing not linked to costs/ | / Lump sum contribution/ / Financing not linked to costs/ | / Lump sum contribution/ / Financing not linked to costs/ | |
| Status of completion | COMPLETED | COMPLETED | COMPLETED | COMPLETED | COMPLETED | COMPLETED | COMPLETED | PARTIALLY COMPLETED | PARTIALLY COMPLETED | COMPLETED | NOT COMPLETED | |
| | a | b | c | d | e | f | g | h | i | j | k | l = a + b+ c + d+ e+ f+ g+ h+ i+ j+ k |
| 1 – [short name beneficiary] | | | | | | | | | | | | |
| 1.1 – [short name affiliated entity] | | | | | | | | | | | | |
| 2 – [short name beneficiary] | | | | | | | | | | | | |
| 2.1 – [short name affiliated entity] | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| X – [short name associated partner] | | | | | | | | | | | | |
| Total consortium | | | | | | | | | | | | |

**The consortium hereby confirms that:**

The information provided is complete, reliable and true.

The lump sum contributions declared are eligible (in particular, the work packages have been completed and the work has been properly implemented and/or the results were achieved; see Article 6).

The proper implementation of the action/achievement of the results can be substantiated by adequate records and supporting documentation that will be produced upon request or in the context of checks, reviews, audits and investigations (see Articles 19, 21 and 25).

[redacted]

**ANNEX 5**

# SPECIFIC RULES

## CONFIDENTIALITY AND SECURITY (— ARTICLE 13)

### Sensitive information with security recommendation

Sensitive information with a security recommendation must comply with the additional requirements imposed by the granting authority.

Before starting the action tasks concerned, the beneficiaries must have obtained all approvals or other mandatory documents needed for implementing the task. The documents must be kept on file and be submitted upon request by the coordinator to the granting authority. If they are not in English, they must be submitted together with an English summary.

For requirements restricting disclosure or dissemination, the information must be handled in accordance with the recommendation and may be disclosed or disseminated only after written approval from the granting authority.

### EU classified information

If EU classified information is used or generated by the action, it must be treated in accordance with the security classification guide (SCG) and security aspect letter (SAL) set out in Annex 1 and Decision 2015/444[1] and its implementing rules — until it is declassified.

Deliverables which contain EU classified information must be submitted according to special procedures agreed with the granting authority.

Action tasks involving EU classified information may be subcontracted only with prior explicit written approval from the granting authority and only to entities established in an EU Member State or in a non-EU country with a security of information agreement with the EU (or an administrative arrangement with the Commission).

EU classified information may not be disclosed to any third party (including participants involved in the action implementation) without prior explicit written approval from the granting authority.

## ETHICS (— ARTICLE 14)

### Ethics and research integrity

The beneficiaries must carry out the action in compliance with:

- ethical principles (including the highest standards of research integrity)

---

[1] Commission Decision 2015/444/EC, Euratom of 13 March 2015 on the security rules for protecting EU classified information (OJ L 72, 17.3.2015, p. 53).

and

- applicable EU, international and national law, including the EU Charter of Fundamental Rights and the European Convention for the Protection of Human Rights and Fundamental Freedoms and its Supplementary Protocols.

No funding can be granted, within or outside the EU, for activities that are prohibited in all Member States. No funding can be granted in a Member State for an activity which is forbidden in that Member State.

The beneficiaries must pay particular attention to the principle of proportionality, the right to privacy, the right to the protection of personal data, the right to the physical and mental integrity of persons, the right to non-discrimination, the need to ensure protection of the environment and high levels of human health protection.

The beneficiaries must ensure that the activities under the action have an exclusive focus on civil applications.

The beneficiaries must ensure that the activities under the action do not:

- aim at human cloning for reproductive purposes
- intend to modify the genetic heritage of human beings which could make such modifications heritable (with the exception of research relating to cancer treatment of the gonads, which may be financed)
- intend to create human embryos solely for the purpose of research or for the purpose of stem cell procurement, including by means of somatic cell nuclear transfer, or
- lead to the destruction of human embryos (for example, for obtaining stem cells).

Activities involving research on human embryos or human embryonic stem cells may be carried out only if:

- they are set out in Annex 1 or
- the coordinator has obtained explicit approval (in writing) from the granting authority.

In addition, the beneficiaries must respect the fundamental principle of research integrity — as set out in the European Code of Conduct for Research Integrity[2].

This implies compliance with the following principles:

- reliability in ensuring the quality of research reflected in the design, the methodology, the analysis and the use of resources
- honesty in developing, undertaking, reviewing, reporting and communicating research in a transparent, fair and unbiased way

[2] European Code of Conduct for Research Integrity of ALLEA (All European Academies).

- respect for colleagues, research participants, society, ecosystems, cultural heritage and the environment

- accountability for the research from idea to publication, for its management and organisation, for training, supervision and mentoring, and for its wider impacts

and means that beneficiaries must ensure that persons carrying out research tasks follow the good research practices including ensuring, where possible, openness, reproducibility and traceability and refrain from the research integrity violations described in the Code.

Activities raising ethical issues must comply with the additional requirements formulated by the ethics panels (including after checks, reviews or audits; see Article 25).

Before starting an action task raising ethical issues, the beneficiaries must have obtained all approvals or other mandatory documents needed for implementing the task, notably from any (national or local) ethics committee or other bodies such as data protection authorities.

The documents must be kept on file and be submitted upon request by the coordinator to the granting authority. If they are not in English, they must be submitted together with an English summary, which shows that the documents cover the action tasks in question and includes the conclusions of the committee or authority concerned (if any).

## VALUES (— ARTICLE 14)

### Gender mainstreaming

The beneficiaries must take all measures to promote equal opportunities between men and women in the implementation of the action and, where applicable, in line with the gender equality plan. They must aim, to the extent possible, for a gender balance at all levels of personnel assigned to the action, including at supervisory and managerial level.

## INTELLECTUAL PROPERTY RIGHTS (IPR) — BACKGROUND AND RESULTS — ACCESS RIGHTS AND RIGHTS OF USE (— ARTICLE 16)

### Definitions

Access rights — Rights to use results or background.

Dissemination — The public disclosure of the results by appropriate means, other than resulting from protecting or exploiting the results, including by scientific publications in any medium.

Exploit(ation) — The use of results in further research and innovation activities other than those covered by the action concerned, including among other things, commercial exploitation such as developing, creating, manufacturing and marketing a product or process, creating and providing a service, or in standardisation activities.

Fair and reasonable conditions — Appropriate conditions, including possible financial terms or royalty-free conditions, taking into account the specific circumstances of the request for access, for example the actual or potential value of the results or background to which access is requested and/or the scope, duration or other characteristics of the exploitation envisaged.

FAIR principles — 'findability', 'accessibility', 'interoperability' and 'reusability'.

Open access — Online access to research outputs provided free of charge to the end-user.

Open science — An approach to the scientific process based on open cooperative work, tools and diffusing knowledge.

Research data management — The process within the research lifecycle that includes the organisation, storage, preservation, security, quality assurance, allocation of persistent identifiers (PIDs) and rules and procedures for sharing of data including licensing.

Research outputs — Results to which access can be given in the form of scientific publications, data or other engineered results and processes such as software, algorithms, protocols, models, workflows and electronic notebooks.

**Scope of the obligations**

For this section, references to 'beneficiary' or 'beneficiaries' do not include affiliated entities (if any).

**Agreement on background**

The beneficiaries must identify in a written agreement the background as needed for implementing the action or for exploiting its results.

Where the call conditions restrict control due to strategic interests reasons, background that is subject to control or other restrictions by a country (or entity from a country) which is not one of the eligible countries or target countries set out in the call conditions and that impact the exploitation of the results (i.e. would make the exploitation of the results subject to control or restrictions) must not be used and must be explicitly excluded from it in the agreement on background — unless otherwise agreed with the granting authority.

**Ownership of results**

Results are owned by the beneficiaries that generate them.

However, two or more beneficiaries own results jointly if:

- they have jointly generated them and
- it is not possible to:
    - establish the respective contribution of each beneficiary, or
    - separate them for the purpose of applying for, obtaining or maintaining their protection.

The joint owners must agree — in writing — on the allocation and terms of exercise of their joint ownership ('**joint ownership agreement**'), to ensure compliance with their obligations under this Agreement.

Unless otherwise agreed in the joint ownership agreement or consortium agreement, each joint owner may grant non-exclusive licences to third parties to exploit the jointly-owned results (without any right to sub-license), if the other joint owners are given:

- at least 45 days advance notice and
- fair and reasonable compensation.

The joint owners may agree — in writing — to apply another regime than joint ownership.

If third parties (including employees and other personnel) may claim rights to the results, the beneficiary concerned must ensure that those rights can be exercised in a manner compatible with its obligations under the Agreement.

The beneficiaries must indicate the owner(s) of the results (results ownership list) in the final periodic report.

**Protection of results**

Beneficiaries which have received funding under the grant must adequately protect their results — for an appropriate period and with appropriate territorial coverage — if protection is possible and justified, taking into account all relevant considerations, including the prospects for commercial exploitation, the legitimate interests of the other beneficiaries and any other legitimate interests.

**Exploitation of results**

Beneficiaries which have received funding under the grant must — up to four years after the end of the action (see Data Sheet, Point 1) — use their best efforts to exploit their results directly or to have them exploited indirectly by another entity, in particular through transfer or licensing.

If, despite a beneficiary's best efforts, the results are not exploited within one year after the end of the action, the beneficiaries must (unless otherwise agreed in writing with the granting authority) use the Horizon Results Platform to find interested parties to exploit the results.

If results are incorporated in a standard, the beneficiaries must (unless otherwise agreed with the granting authority or unless it is impossible) ask the standardisation body to include the funding statement (see Article 17) in (information related to) the standard.

*Additional exploitation obligations*

Where the call conditions impose additional exploitation obligations (including obligations linked to the restriction of participation or control due to strategic assets, interests, autonomy or security reasons), the beneficiaries must comply with them — up to four years after the end of the action (see Data Sheet, Point 1).

Where the call conditions impose additional exploitation obligations in case of a public emergency, the beneficiaries must (if requested by the granting authority) grant for a limited period of time specified in the request, non-exclusive licences — under fair and reasonable conditions — to their results to legal entities that need the results to address the public emergency and commit to rapidly and broadly exploit the resulting products and services at fair and reasonable conditions. This provision applies up to four years after the end of the action (see Data Sheet, Point 1).

[redacted]

*Additional information obligation relating to standards*

Where the call conditions impose additional information obligations relating to possible standardisation, the beneficiaries must — up to four years after the end of the action (see Data Sheet, Point 1) — inform the granting authority, if the results could reasonably be expected to contribute to European or international standards.

**Transfer and licensing of results**

*Transfer of ownership*

The beneficiaries may transfer ownership of their results, provided this does not affect compliance with their obligations under the Agreement.

The beneficiaries must ensure that their obligations under the Agreement regarding their results are passed on to the new owner and that this new owner has the obligation to pass them on in any subsequent transfer.

Moreover, they must inform the other beneficiaries with access rights of the transfer at least 45 days in advance (or less if agreed in writing), unless agreed otherwise in writing for specifically identified third parties including affiliated entities or unless impossible under the applicable law. This notification must include sufficient information on the new owner to enable the beneficiaries concerned to assess the effects on their access rights. The beneficiaries may object within 30 days of receiving notification (or less if agreed in writing), if they can show that the transfer would adversely affect their access rights. In this case, the transfer may not take place until agreement has been reached between the beneficiaries concerned.

*Granting licences*

The beneficiaries may grant licences to their results (or otherwise give the right to exploit them), including on an exclusive basis, provided this does not affect compliance with their obligations.

Exclusive licences for results may be granted only if all the other beneficiaries concerned have waived their access rights.

*Granting authority right to object to transfers or licensing — Horizon Europe actions*

Where the call conditions in Horizon Europe actions provide for the right to object to transfers or licensing, the granting authority may — up to four years after the end of the action (see Data Sheet, Point 1) — object to a transfer of ownership or the exclusive licensing of results, if:

- the beneficiaries which generated the results have received funding under the grant
- it is to a legal entity established in a non-EU country not associated with Horizon Europe, and
- the granting authority considers that the transfer or licence is not in line with EU interests.

Beneficiaries that intend to transfer ownership or grant an exclusive licence must formally notify the granting authority before the intended transfer or licensing takes place and:

- identify the specific results concerned
- describe in detail the new owner or licensee and the planned or potential exploitation of the results, and
- include a reasoned assessment of the likely impact of the transfer or licence on EU interests, in particular regarding competitiveness as well as consistency with ethical principles and security considerations.

The granting authority may request additional information.

If the granting authority decides to object to a transfer or exclusive licence, it must formally notify the beneficiary concerned within 60 days of receiving notification (or any additional information it has requested).

No transfer or licensing may take place in the following cases:

- pending the granting authority decision, within the period set out above
- if the granting authority objects
- until the conditions are complied with, if the granting authority objection comes with conditions.

A beneficiary may formally notify a request to waive the right to object regarding intended transfers or grants to a specifically identified third party, if measures safeguarding EU interests are in place. If the granting authority agrees, it will formally notify the beneficiary concerned within 60 days of receiving notification (or any additional information requested).

*Granting authority right to object to transfers or licensing — Euratom actions*

Where the call conditions in Euratom actions provide for the right to object to transfers or licensing, the granting authority may — up to four years after the end of the action (see Data Sheet, Point 1) — object to a transfer of ownership or the exclusive or non-exclusive licensing of results, if:

- the beneficiaries which generated the results have received funding under the grant
- it is to a legal entity established in a non-EU country not associated to the Euratom Research and Training Programme 2021-2025 and
- the granting authority considers that the transfer or licence is not in line with the EU interests.

Beneficiaries that intend to transfer ownership or grant a licence must formally notify the granting authority before the intended transfer or licensing takes place and:

- identify the specific results concerned
- describe in detail the results, the new owner or licensee and the planned or potential exploitation of the results, and
- include a reasoned assessment of the likely impact of the transfer or licence on EU interests, in particular regarding competitiveness as well as consistency with

ethical principles and security considerations (including the defence interests of the EU Member States under Article 24 of the Euratom Treaty).

The granting authority may request additional information.

If the granting authority decides to object to a transfer or licence, it will formally notify the beneficiary concerned within 60 days of receiving notification (or any additional information requested).

No transfer or licensing may take place in the following cases:

- pending the granting authority decision, within the period set out above
- if the granting authority objects
- until the conditions are complied with, if the granting authority objection comes with conditions.

A beneficiary may formally notify a request to waive the right to object regarding intended transfers or grants to a specifically identified third party, if measures safeguarding EU interests are in place. If the granting authority agrees, it will formally notify the beneficiary concerned within 60 days of receiving notification (or any additional information requested).

*Limitations to transfers and licensing due to strategic assets, interests, autonomy or security reasons of the EU and its Member States*

Where the call conditions restrict participation or control due to strategic assets, interests, autonomy or security reasons, the beneficiaries may not transfer ownership of their results or grant licences to third parties which are established in countries which are not eligible countries or target countries set out in the call conditions (or, if applicable, are controlled by such countries or entities from such countries) — unless they have requested and received prior approval by the granting authority.

The request must:

- identify the specific results concerned
- describe in detail the new owner and the planned or potential exploitation of the results, and
- include a reasoned assessment of the likely impact of the transfer or license on the strategic assets, interests, autonomy or security of the EU and its Member States.

The granting authority may request additional information.

**Access rights to results and background**

*Exercise of access rights — Waiving of access rights — No sub-licensing*

Requests to exercise access rights and the waiver of access rights must be in writing.

Unless agreed otherwise in writing with the beneficiary granting access, access rights do not include the right to sub-license.

If a beneficiary is no longer involved in the action, this does not affect its obligations to grant access.

If a beneficiary defaults on its obligations, the beneficiaries may agree that that beneficiary no longer has access rights.

*Access rights for implementing the action*

The beneficiaries must grant each other access — on a royalty-free basis — to background needed to implement their own tasks under the action, unless the beneficiary that holds the background has — before acceding to the Agreement —:

- informed the other beneficiaries that access to its background is subject to restrictions, or

- agreed with the other beneficiaries that access would not be on a royalty-free basis.

The beneficiaries must grant each other access — on a royalty-free basis — to results needed for implementing their own tasks under the action.

*Access rights for exploiting the results*

The beneficiaries must grant each other access — under fair and reasonable conditions — to results needed for exploiting their results.

The beneficiaries must grant each other access — under fair and reasonable conditions — to background needed for exploiting their results, unless the beneficiary that holds the background has — before acceding to the Agreement — informed the other beneficiaries that access to its background is subject to restrictions.

Requests for access must be made — unless agreed otherwise in writing — up to one year after the end of the action (see Data Sheet, Point 1).

*Access rights for entities under the same control*

Unless agreed otherwise in writing by the beneficiaries, access to results and, subject to the restrictions referred to above (if any), background must also be granted — under fair and reasonable conditions — to entities that:

- are established in an EU Member State or Horizon Europe associated country

- are under the direct or indirect control of another beneficiary, or under the same direct or indirect control as that beneficiary, or directly or indirectly controlling that beneficiary and

- need the access to exploit the results of that beneficiary.

Unless agreed otherwise in writing, such requests for access must be made by the entity directly to the beneficiary concerned.

Requests for access must be made — unless agreed otherwise in writing — up to one year after the end of the action (see Data Sheet, Point 1).

*Access rights for the granting authority, EU institutions, bodies, offices or agencies and national authorities to results for policy purposes — Horizon Europe actions*

[redacted]

In Horizon Europe actions, the beneficiaries which have received funding under the grant must grant access to their results — on a royalty-free basis — to the granting authority, EU institutions, bodies, offices or agencies for developing, implementing and monitoring EU policies or programmes. Such access rights do not extend to beneficiaries' background.

Such access rights are limited to non-commercial and non-competitive use.

For actions under the cluster 'Civil Security for Society', such access rights also extend to national authorities of EU Member States for developing, implementing and monitoring their policies or programmes in this area. In this case, access is subject to a bilateral agreement to define specific conditions ensuring that:

- the access rights will be used only for the intended purpose and
- appropriate confidentiality obligations are in place.

Moreover, the requesting national authority or EU institution, body, office or agency (including the granting authority) must inform all other national authorities of such a request.

*Access rights for the granting authority, Euratom institutions, funding bodies or the Joint Undertaking Fusion for Energy — Euratom actions*

In Euratom actions, the beneficiaries which have received funding under the grant must grant access to their results — on a royalty-free basis — to the granting authority, Euratom institutions, funding bodies or the Joint Undertaking Fusion for Energy for developing, implementing and monitoring Euratom policies and programmes or for compliance with obligations assumed through international cooperation with non-EU countries and international organisations.

Such access rights include the right to authorise third parties to use the results in public procurement and the right to sub-license and are limited to non-commercial and non-competitive use.

*Additional access rights*

Where the call conditions impose additional access rights, the beneficiaries must comply with them.

## COMMUNICATION, DISSEMINATION, OPEN SCIENCE AND VISIBILITY (— ARTICLE 17)

### Dissemination

*Dissemination of results*

The beneficiaries must disseminate their results as soon as feasible, in a publicly available format, subject to any restrictions due to the protection of intellectual property, security rules or legitimate interests.

A beneficiary that intends to disseminate its results must give at least 15 days advance notice to the other beneficiaries (unless agreed otherwise), together with sufficient information on the results it will disseminate.

Any other beneficiary may object within (unless agreed otherwise) 15 days of receiving notification, if it can show that its legitimate interests in relation to the results or background would be significantly harmed. In such cases, the results may not be disseminated unless appropriate steps are taken to safeguard those interests.

*Additional dissemination obligations*

Where the call conditions impose additional dissemination obligations, the beneficiaries must also comply with those.

**Open Science**

*Open science: open access to scientific publications*

The beneficiaries must ensure open access to peer-reviewed scientific publications relating to their results. In particular, they must ensure that:

- at the latest at the time of publication, a machine-readable electronic copy of the published version or the final peer-reviewed manuscript accepted for publication, is deposited in a trusted repository for scientific publications

- immediate open access is provided to the deposited publication via the repository, under the latest available version of the Creative Commons Attribution International Public Licence (CC BY) or a licence with equivalent rights; for monographs and other long-text formats, the licence may exclude commercial uses and derivative works (e.g. CC BY-NC, CC BY-ND) and

- information is given via the repository about any research output or any other tools and instruments needed to validate the conclusions of the scientific publication.

Beneficiaries (or authors) must retain sufficient intellectual property rights to comply with the open access requirements.

Metadata of deposited publications must be open under a Creative Common Public Domain Dedication (CC 0) or equivalent, in line with the FAIR principles (in particular machine-actionable) and provide information at least about the following: publication (author(s), title, date of publication, publication venue); Horizon Europe or Euratom funding; grant project name, acronym and number; licensing terms; persistent identifiers for the publication, the authors involved in the action and, if possible, for their organisations and the grant. Where applicable, the metadata must include persistent identifiers for any research output or any other tools and instruments needed to validate the conclusions of the publication.

Only publication fees in full open access venues for peer-reviewed scientific publications are eligible for reimbursement.

*Open science: research data management*

The beneficiaries must manage the digital research data generated in the action ('data') responsibly, in line with the FAIR principles and by taking all of the following actions:

- establish a data management plan ('DMP') (and regularly update it)

- as soon as possible and within the deadlines set out in the DMP, deposit the data in a trusted repository; if required in the call conditions, this repository must be federated in the EOSC in compliance with EOSC requirements

- as soon as possible and within the deadlines set out in the DMP, ensure open access — via the repository — to the deposited data, under the latest available version of the Creative Commons Attribution International Public License (CC BY) or Creative Commons Public Domain Dedication (CC 0) or a licence with equivalent rights, following the principle 'as open as possible as closed as necessary', unless providing open access would in particular:

    - be against the beneficiary's legitimate interests, including regarding commercial exploitation, or

    - be contrary to any other constraints, in particular the EU competitive interests or the beneficiary's obligations under this Agreement; if open access is not provided (to some or all data), this must be justified in the DMP

- provide information via the repository about any research output or any other tools and instruments needed to re-use or validate the data.

Metadata of deposited data must be open under a Creative Common Public Domain Dedication (CC 0) or equivalent (to the extent legitimate interests or constraints are safeguarded), in line with the FAIR principles (in particular machine-actionable) and provide information at least about the following: datasets (description, date of deposit, author(s), venue and embargo); Horizon Europe or Euratom funding; grant project name, acronym and number; licensing terms; persistent identifiers for the dataset, the authors involved in the action, and, if possible, for their organisations and the grant. Where applicable, the metadata must include persistent identifiers for related publications and other research outputs.

*Open science: additional practices*

Where the call conditions impose additional obligations regarding open science practices, the beneficiaries must also comply with those.

Where the call conditions impose additional obligations regarding the validation of scientific publications, the beneficiaries must provide (digital or physical) access to data or other results needed for validation of the conclusions of scientific publications, to the extent that their legitimate interests or constraints are safeguarded (and unless they already provided the (open) access at publication).

Where the call conditions impose additional open science obligations in case of a public emergency, the beneficiaries must (if requested by the granting authority) immediately deposit any research output in a repository and provide open access to it under a CC BY licence, a Public Domain Dedication (CC 0) or equivalent. As an exception, if the access would be against the beneficiaries' legitimate interests, the beneficiaries must grant non-exclusive licenses — under fair and reasonable conditions — to legal entities that need the research output to address the public emergency and commit to rapidly and broadly exploit the resulting products and services at fair and reasonable conditions. This provision applies up to four years after the end of the action (see Data Sheet, Point 1).

**Plan for the exploitation and dissemination of results including communication activities**

Unless excluded by the call conditions, the beneficiaries must provide and regularly update a plan for the exploitation and dissemination of results including communication activities.

## SPECIFIC RULES FOR CARRYING OUT THE ACTION (— ARTICLE 18)

### Implementation in case of restrictions due to strategic assets, interests, autonomy or security of the EU and its Member States

Where the call conditions restrict participation or control due to strategic assets, interests, autonomy or security, the beneficiaries must ensure that none of the entities that participate as affiliated entities, associated partners, subcontractors or recipients of financial support to third parties are established in countries which are not eligible countries or target countries set out in the call conditions (or, if applicable, are controlled by such countries or entities from such countries) — unless otherwise agreed with the granting authority.

The beneficiaries must moreover ensure that any cooperation with entities established in countries which are not eligible countries or target countries set out in the call conditions (or, if applicable, are controlled by such countries or entities from such countries) does not affect the strategic assets, interests, autonomy or security of the EU and its Member States.

### Recruitment and working conditions for researchers

The beneficiaries must take all measures to implement the principles set out in the Commission Recommendation on the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers[3], in particular regarding:

- working conditions
- transparent recruitment processes based on merit, and
- career development.

The beneficiaries must ensure that researchers and all participants involved in the action are aware of them.

### Specific rules for access to research infrastructure activities

### Definitions

Research Infrastructures — Facilities that provide resources and services for the research communities to conduct research and foster innovation in their fields. This definition includes the associated human resources, and it covers major equipment or sets of instruments; knowledge-related facilities such as collections, archives or scientific data infrastructures; computing systems, communication networks, and any other infrastructure, of a unique nature and open to external users, essential to achieve excellence in research and innovation. Where relevant, they may be used beyond research, for example

[3] Commission Recommendation 2005/251/EC of 11 March 2005 on the European Charter for Researchers and on a Code of Conduct for the Recruitment of Researchers (OJ L 75, 22.3.2005, p. 67).

for education or public services, and they may be 'single-sited', 'virtual' or 'distributed'[4]:

When implementing access to research infrastructure activities, the beneficiaries must respect the following conditions:

- for transnational access:
  - access which must be provided:

    The access must be free of charge, transnational access to research infrastructure or installations for selected user-groups.

    The access must include the logistical, technological and scientific support and the specific training that is usually provided to external researchers using the infrastructure. Transnational access can be either in person (hands-on), provided to selected users that visit the installation to make use of it, or remote, through the provision to selected user-groups of remote scientific services (e.g. provision of reference materials or samples, remote access to a high-performance computing facility).

  - categories of users that may have access:

    Transnational access must be provided to selected user-groups, i.e. teams of one or more researchers (users).

    The majority of the users must work in a country other than the country(ies) where the installation is located (unless access is provided by an international organisation, the Joint Research Centre (JRC), an ERIC or similar legal entity).

    Only user groups that are allowed to disseminate the results they have generated under the action may benefit from the access (unless the users are working for SMEs).

    Access for user groups with a majority of users not working in a EU Member State or Horizon Europe associated country is limited to 20% of the total amount of units of access provided under the grant (unless a higher percentage is foreseen in Annex 1).

  - procedure and criteria for selecting user groups:

    The user groups must request access by submitting (in writing) a description of the work that they wish to carry out and the names, nationalities and home institutions of the users.

    The user groups must be selected by (one or more) selection panels set up by the consortium.

[4] See Article 2(1) of the Horizon Europe Framework Programme Regulation 2021/695.

The selection panels must be composed of international experts in the field, at least half of them independent from the consortium (unless otherwise specified in Annex 1).

The selection panels must assess all proposals received and recommend a short-list of the user groups that should benefit from access.

The selection panels must base their selection on scientific merit, taking into account that priority should be given to user groups composed of users who:

- have not previously used the installation and
- are working in countries where no equivalent research infrastructure exist.

It will apply the principles of transparency, fairness and impartiality.

Where the call conditions impose additional rules for the selection of user groups, the beneficiaries must also comply with those.

- other conditions:

The beneficiaries must request written approval from the granting authority for the selection of user groups requiring visits to the installations exceeding 3 months (unless such visits are foreseen in Annex 1).

In addition, the beneficiaries must:

- advertise widely, including on a their websites, the access offered under the Agreement
- promote equal opportunities in advertising the access and take into account the gender dimension when defining the support provided to users
- ensure that users comply with the terms and conditions of the Agreement
- ensure that its obligations under Articles 12, 13, 17 and 33 also apply to the users
- keep records of the names, nationalities, and home institutions of users, as well as the nature and quantity of access provided to them

- for virtual access:
  - access which must be provided:

The access must be free of charge, virtual access to research infrastructure or installations.

'Virtual access' means open and free access through communication networks to digital resources and services needed for research, without selecting the users to whom access is provided.

The access must include the support that is usually provided to external users.

Where allowed by the call conditions, beneficiaries may in justified cases define objective eligibility criteria (e.g. affiliation to a research or academic institution) for specific users.

- other conditions:

  The beneficiaries must have the virtual access services assessed periodically by a board composed of international experts in the field, at least half of whom must be independent from the consortium (unless otherwise specified in Annex 1). For this purpose, information and statistics on the users and the nature and quantity of the access provided, must be made available to the board.

  The beneficiaries must advertise widely, including on a dedicated website, the access offered under the grant and the eligibility criteria, if any.

  Where the call conditions impose additional traceability[5] obligations, information on the traceability of the users and the nature and quantity of access must be provided by the beneficiaries.

These obligations apply regardless of the form of funding or budget categories used to declare the costs (unit costs or actual costs or a combination of the two).

[5] According to the definition given in ISO 9000, i.e.: "Traceability is the ability to trace the history, application, use and location of an item or its characteristics through recorded identification data." The users can be traced, for example, by authentication and/or by authorization or by other means that allows for analysis of the type of users and the nature and quantity of access provided.

This electronic receipt is a digitally signed version of the document submitted by your organisation. Both the content of the document and a set of metadata have been digitally sealed.

This digital signature mechanism, using a public-private key pair mechanism, uniquely binds this eReceipt to the modules of the Funding & Tenders Portal of the European Commission, to the transaction for which it was generated and ensures its full integrity. Therefore a complete digitally signed trail of the transaction is available both for your organisation and for the issuer of the eReceipt.

Any attempt to modify the content will lead to a break of the integrity of the electronic signature, which can be verified at any time by clicking on the eReceipt validation symbol.

More info about eReceipts can be found in the FAQ page of the Funding & Tenders Portal.