EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR RESEARCH & INNOVATION
Open Innovation and Open Science
Research infrastructure

GRANT AGREEMENT

NUMBER — 730989 — IDEAAL

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

on the one part,

the **European Union** ('the EU'), represented by the European Commission ('the Commission'),

represented for the purposes of signature of this Agreement by Head of Unit, DIRECTORATE-GENERAL FOR RESEARCH & INNOVATION, Open Innovation and Open Science , Administration and finance, Pascale CID,

and

on the other part,

1. 'the coordinator':

GRAND ACCELERATEUR NATIONAL D'IONS LOURDS (GANIL) GIE, 99788830000167312, established in Boulevard Henri Becquerel, CAEN 14076, France, VAT number 84997888300, represented for the purposes of signing the Agreement by Deputy Director, Marek LEWITOWICZ

and the following other beneficiaries, if they sign their 'Accession Form' (see Annex 3 and Article 56):

2. **CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE CNRS (CNRS)**, 180089013, established in RUE MICHEL ANGE 3, PARIS 75794, France, VAT number FR40180089013,

3. **COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES (CEA)** EPIC, 775685019, established in RUE LEBLANC 25, PARIS 15 75015, France, VAT number FR43775685019,

4. **GSI HELMHOLTZZENTRUM FUER SCHWERIONENFORSCHUNG Gmbh (GSI)** GMBH, HRB1528, established in PLANCKSTRASSE 1, DARMSTADT 64291, Germany, VAT number DE111671917,

5. **THE HENRYK NIEWODNICZANSKI INSTITUTE OF NUCLEAR PHYSICS, POLISH ACADEMY OF SCIENCES (IFJ PAN)**, established in RADZIKOWSKIEGO 152, KRAKOW 31 342, Poland, VAT number PL6750000444,

6. **NUCLEOPOLIS POLE NORMAND DES SCIENCES NUCLEAIRES ET DE LEURS APPLICATIONS (Nucleopolis)** FR20, 527614416, established in 2 PLACE ANTON PHILIPPS, COLOMBELLES 14460, France, VAT number FR73527614416,

Unless otherwise specified, references to ‘beneficiary’ or ‘beneficiaries’ include the coordinator.

The parties referred to above have agreed to enter into the Agreement under the terms and conditions below.

By signing the Agreement or the Accession Form, the beneficiaries accept the grant and agree to implement it under their own responsibility and in accordance with the Agreement, with all the obligations and conditions it sets out.

The Agreement is composed of:

Terms and Conditions

Annex 1 Description of the action

Annex 2 Estimated budget for the action

2a Additional information on the estimated budget

Annex 3 Accession Forms

Annex 4 Model for the financial statements

Annex 5 Model for the certificate on the financial statements

Annex 6 Model for the certificate on the methodology

TERMS AND CONDITIONS

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CHAPTER 1 GENERAL

ARTICLE 1 — SUBJECT OF THE AGREEMENT

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

CHAPTER 2 ACTION

ARTICLE 2 — ACTION TO BE IMPLEMENTED

The grant is awarded for the action entitled '**International Development of gAnil-spirAL2 — IDEAAL**' **('action')**, as described in Annex 1.

ARTICLE 3 — DURATION AND STARTING DATE OF THE ACTION

The duration of the action will be **36 months** as of 1 January 2017 ('**starting date of the action**').

ARTICLE 4 — ESTIMATED BUDGET AND BUDGET TRANSFERS

4.1 Estimated budget

The '**estimated budget**' for the action is set out in Annex 2.

It contains the estimated eligible costs and the forms of costs, broken down by beneficiary and budget category (see Articles 5, 6).

4.2 Budget transfers

The estimated budget breakdown indicated in Annex 2 may be adjusted — without an amendment (see Article 55) — by transfers of amounts between beneficiaries, budget categories and/or forms of costs set out in Annex 2, if the action is implemented as described in Annex 1.

However, the beneficiaries may not add costs relating to subcontracts not provided for in Annex 1, unless such additional subcontracts are approved by an amendment or in accordance with Article 13.

CHAPTER 3 GRANT

ARTICLE 5 — GRANT AMOUNT, FORM OF GRANT, REIMBURSEMENT RATES AND FORMS OF COSTS

5.1 Maximum grant amount

The '**maximum grant amount**' is **EUR 3,883,390.00** (three million eight hundred and eighty three thousand three hundred and ninety EURO).

5.2 Form of grant, reimbursement rates and forms of costs

The grant reimburses **100% of the action's eligible costs** (see Article 6) ('**reimbursement of eligible costs grant**') (see Annex 2).

The estimated eligible costs of the action are EUR **3,883,390.00** (three million eight hundred and eighty three thousand three hundred and ninety EURO).

Eligible costs (see Article 6) must be declared under the following forms ('**forms of costs**'):

(a) for **direct personnel costs** (excluding direct personnel costs covered by the unit cost under Point (f)):

- as actually incurred costs ('**actual costs**') or
- on the basis of an amount per unit calculated by the beneficiary in accordance with its usual cost accounting practices ('**unit costs**').

Personnel **costs for SME owners** or **beneficiaries that are natural persons** not receiving a salary (see Article 6.2, Points A.4 and A.5) must be declared on the basis of the amount per unit set out in Annex 2a (**unit costs**);

(b) for **direct costs for subcontracting** (excluding subcontracting costs covered by the unit cost under Point (f)): as actually incurred costs (**actual costs**);

(c) for **direct costs of providing financial support to third parties** (excluding costs of financial support covered by the unit cost under Point (f)): not applicable;

(d) for **other direct costs** (excluding other direct costs covered by the unit cost under Point (f)): as actually incurred costs (**actual costs**);

(e) for **indirect costs** (excluding indirect costs covered by the unit cost under Point (f)): on the basis of a flat-rate applied as set out in Article 6.2, Point E ('**flat-rate costs**');

(f) for **'Costs for providing trans-national access to research infrastructure'**: on the basis of the amount(s) per unit set out in Annex 2a (**unit costs**).

5.3 Final grant amount — Calculation

The '**final grant amount**' depends on the actual extent to which the action is implemented in accordance with the Agreement's terms and conditions.

This amount is calculated by the Commission — when the payment of the balance is made (see Article 21.4) — in the following steps:

Step 1 – Application of the reimbursement rates to the eligible costs

Step 2 – Limit to the maximum grant amount

Step 3 – Reduction due to the no-profit rule

Step 4 – Reduction due to substantial errors, irregularities or fraud or serious breach of obligations

5.3.1 Step 1 — Application of the reimbursement rates to the eligible costs

The reimbursement rate(s) (see Article 5.2) are applied to the eligible costs (actual costs, unit costs and flat-rate costs; see Article 6) declared by the beneficiaries (see Article 20) and approved by the Commission (see Article 21).

5.3.2 Step 2 — Limit to the maximum grant amount

If the amount obtained following Step 1 is higher than the maximum grant amount set out in Article 5.1, it will be limited to the latter.

5.3.3 Step 3 — Reduction due to the no-profit rule

The grant must not produce a profit.

'**Profit**' means the surplus of the amount obtained following Steps 1 and 2 plus the action's total receipts, over the action's total eligible costs.

The '**action's total eligible costs**' are the consolidated total eligible costs approved by the Commission.

The '**action's total receipts**' are the consolidated total receipts generated during its duration (see Article 3).

The following are considered **receipts**:

(a) income generated by the action; if the income is generated from selling equipment or other assets purchased under the Agreement, the receipt is up to the amount declared as eligible under the Agreement;

(b) financial contributions given by third parties to the beneficiary specifically to be used for the action, and

(c) in-kind contributions provided by third parties free of charge and specifically to be used for the action, if they have been declared as eligible costs.

The following are however not considered receipts:

(a) income generated by exploiting the action's results (see Article 28);

(b) financial contributions by third parties, if they may be used to cover costs other than the eligible costs (see Article 6);

(c) financial contributions by third parties with no obligation to repay any amount unused at the end of the period set out in Article 3.

If there is a profit, it will be deducted from the amount obtained following Steps 1 and 2.

5.3.4 Step 4 — Reduction due to substantial errors, irregularities or fraud or serious breach of obligations — Reduced grant amount — Calculation

If the grant is reduced (see Article 43), the Commission will calculate the reduced grant amount by deducting the amount of the reduction (calculated in proportion to the seriousness of the errors, irregularities or fraud or breach of obligations, in accordance with Article 43.2) from the maximum grant amount set out in Article 5.1.

The final grant amount will be the lower of the following two:

- the amount obtained following Steps 1 to 3 or

- the reduced grant amount following Step 4.

5.4 Revised final grant amount — Calculation

If — after the payment of the balance (in particular, after checks, reviews, audits or investigations; see Article 22) — the Commission rejects costs (see Article 42) or reduces the grant (see Article 43), it will calculate the '**revised final grant amount**' for the beneficiary concerned by the findings.

This amount is calculated by the Commission on the basis of the findings, as follows:

- in case of **rejection of costs**: by applying the reimbursement rate to the revised eligible costs approved by the Commission for the beneficiary concerned;

- in case of **reduction of the grant**: by calculating the concerned beneficiary's share in the grant amount reduced in proportion to the seriousness of the errors, irregularities or fraud or breach of obligations (see Article 43.2).

In case of **rejection of costs and reduction of the grant**, the revised final grant amount for the beneficiary concerned will be the lower of the two amounts above.

ARTICLE 6 — ELIGIBLE AND INELIGIBLE COSTS

6.1 General conditions for costs to be eligible

'**Eligible costs**' are costs that meet the following criteria:

(a) for **actual costs**:

(i) they must be actually incurred by the beneficiary;

(ii) they must be incurred in the period set out in Article 3, with the exception of costs relating to the submission of the periodic report for the last reporting period and the final report (see Article 20);

(iii) they must be indicated in the estimated budget set out in Annex 2;

(iv) they must be incurred in connection with the action as described in Annex 1 and necessary for its implementation;

(v) they must be identifiable and verifiable, in particular recorded in the beneficiary's accounts in accordance with the accounting standards applicable in the country where the beneficiary is established and with the beneficiary's usual cost accounting practices;

(vi) they must comply with the applicable national law on taxes, labour and social security, and

(vii) they must be reasonable, justified and must comply with the principle of sound financial management, in particular regarding economy and efficiency;

(b) for **unit costs**:

(i) they must be calculated as follows:

{amounts per unit set out in Annex 2a or calculated by the beneficiary in accordance with its usual cost accounting practices (see Article 6.2, Point A)

multiplied by

the number of actual units};

(ii) the number of actual units must comply with the following conditions:

- the units must be actually used or produced in the period set out in Article 3;
- the units must be necessary for implementing the action or produced by it, and
- the number of units must be identifiable and verifiable, in particular supported by records and documentation (see Article 18);

(c) for **flat-rate costs**:

(i) they must be calculated by applying the flat-rate set out in Annex 2, and

(ii) the costs (actual costs or unit costs) to which the flat-rate is applied must comply with the conditions for eligibility set out in this Article.

6.2 Specific conditions for costs to be eligible

Costs are eligible if they comply with the general conditions (see above) and the specific conditions set out below for each of the following budget categories:

A. direct personnel costs;
B. direct costs of subcontracting;
C. not applicable;
D. other direct costs;
E. indirect costs;
F. 'Costs for providing trans-national access to research infrastructure'.

'Direct costs' are costs that are directly linked to the action implementation and can therefore be attributed to it directly. They must not include any indirect costs (see Point E below).

'Indirect costs' are costs that are not directly linked to the action implementation and therefore cannot be attributed directly to it.

A. Direct personnel costs (not covered by Point F)

Types of eligible personnel costs

A.1 Personnel costs are eligible, if they are related to personnel working for the beneficiary under an employment contract (or equivalent appointing act) and assigned to the action ('**costs for employees (or equivalent)**'). They must be limited to salaries (including during parental leave), social security contributions, taxes and other costs included in the **remuneration**, if they arise from national law or the employment contract (or equivalent appointing act).

Beneficiaries that are non-profit legal entities[1] may also declare as personnel costs **additional remuneration** for personnel assigned to the action (including payments on the basis of supplementary contracts regardless of their nature), if:

(a) it is part of the beneficiary's usual remuneration practices and is paid in a consistent manner whenever the same kind of work or expertise is required;

(b) the criteria used to calculate the supplementary payments are objective and generally applied by the beneficiary, regardless of the source of funding used.

Additional remuneration for personnel assigned to the action is eligible up to the following amount:

(a) if the person works full time and exclusively on the action during the full year: up to EUR 8 000;

(b) if the person works exclusively on the action but not full-time or not for the full year: up to the corresponding pro-rata amount of EUR 8 000, or

(c) if the person does not work exclusively on the action: up to a pro-rata amount calculated as follows:

{{EUR 8 000

divided by

the number of annual productive hours (see below)},

multiplied by

the number of hours that the person has worked on the action during the year}.

A.2 The **costs for natural persons working under a direct contract** with the beneficiary other than an employment contract are eligible personnel costs, if:

(a) the person works under the beneficiary's instructions and, unless otherwise agreed with the beneficiary, on the beneficiary's premises;

(b) the result of the work carried out belongs to the beneficiary, and

(c) the costs are not significantly different from those for personnel performing similar tasks under an employment contract with the beneficiary.

A.3 The **costs of personnel seconded by a third party against payment** are eligible personnel costs, if the conditions in Article 11.1 are met.

A.4 **Costs of owners** of beneficiaries that are small and medium-sized enterprises ('**SME owners**') who are working on the action and who do not receive a salary are eligible personnel costs, if they correspond to the amount per unit set out in Annex 2a multiplied by the number of actual hours worked on the action.

A.5 **Costs of 'beneficiaries that are natural persons'** not receiving a salary are eligible personnel costs, if they correspond to the amount per unit set out in Annex 2a multiplied by the number of actual hours worked on the action.

A.6 **Personnel costs for providing trans-national access to research infrastructure** are eligible only if also the conditions set out in Article 16.1.1 are met.

[1] For the definition, see Article 2.1(14) of the Rules for Participation Regulation No 1290/2013: '**non-profit legal entity**' means a legal entity which by its legal form is non-profit-making or which has a legal or statutory obligation not to distribute profits to its shareholders or individual members.

Calculation

Personnel costs must be calculated by the beneficiaries as follows:

{{hourly rate

multiplied by

the number of actual hours worked on the action},

plus

for non-profit legal entities: additional remuneration to personnel assigned to the action under the conditions set out above (Point A.1)}.

The number of actual hours declared for a person must be identifiable and verifiable (see Article 18).

The total number of hours declared in EU or Euratom grants, for a person for a year, cannot be higher than the annual productive hours used for the calculations of the hourly rate. Therefore, the maximum number of hours that can be declared for the grant is:

{the number of annual productive hours for the year (see below)

minus

total number of hours declared by the beneficiary for that person in that year for other EU or Euratom grants}.

The '**hourly rate**' is one of the following:

(a) for personnel costs declared as **actual costs:** the hourly rate is calculated *per full financial year*, as follows:

{actual annual personnel costs (excluding additional remuneration) for the person

divided by

number of annual productive hours}.

using the personnel costs and the number of productive hours for each full financial year covered by the reporting period concerned. If a financial year is not closed at the end of the reporting period, the beneficiaries must use the hourly rate of the last closed financial year available.

For the 'number of annual productive hours', the beneficiaries may choose one of the following:

(i) 'fixed number of hours': 1 720 hours for persons working full time (or corresponding pro-rata for persons not working full time);

(ii) 'individual annual productive hours': the total number of hours worked by the person in the year for the beneficiary, calculated as follows:

{annual workable hours of the person (according to the employment contract, applicable collective labour agreement or national law)

plus

overtime worked

minus

absences (such as sick leave and special leave)}.

'Annual workable hours' means the period during which the personnel must be working, at the employer's disposal and carrying out his/her activity or duties under the employment contract, applicable collective labour agreement or national working time legislation.

If the contract (or applicable collective labour agreement or national working time legislation) does not allow to determine the annual workable hours, this option cannot be used;

(iii) 'standard annual productive hours': the 'standard number of annual hours' generally applied by the beneficiary for its personnel in accordance with its usual cost accounting practices. This number must be at least 90% of the 'standard annual workable hours'.

If there is no applicable reference for the standard annual workable hours, this option cannot be used.

For all options, the actual time spent on **parental leave** by a person assigned to the action may be deducted from the number of annual productive hours.

As an alternative, beneficiaries may calculate the hourly rate *per month*, as follows:

{actual monthly personnel cost (excluding additional remuneration) for the person

divided by

{number of annual productive hours / 12}}

using the personnel costs for each month and (one twelfth of) the annual productive hours calculated according to either option (i) or (iii) above, i.e.:

- fixed number of hours or
- standard annual productive hours.

Time spent on **parental leave** may not be deducted when calculating the hourly rate per month. However, beneficiaries may declare personnel costs incurred in periods of parental leave in proportion to the time the person worked on the action in that financial year.

If parts of a basic remuneration are generated over a period longer than a month, the beneficiaries may include only the share which is generated in the month (irrespective of the amount actually paid for that month).

Each beneficiary must use only one option (per full financial year or per month) for each full financial year;

(b) for personnel costs declared on the basis of **unit costs**: the hourly rate is one of the following:

(i) for SME owners or beneficiaries that are natural persons: the hourly rate set out in Annex 2a (see Points A.4 and A.5 above), or

(ii) for personnel costs declared on the basis of the beneficiary's usual cost accounting practices: the hourly rate calculated by the beneficiary in accordance with its usual cost accounting practices, if:

- the cost accounting practices used are applied in a consistent manner, based on objective criteria, regardless of the source of funding;

- the hourly rate is calculated using the actual personnel costs recorded in the beneficiary's accounts, excluding any ineligible cost or costs included in other budget categories.

  The actual personnel costs may be adjusted by the beneficiary on the basis of budgeted or estimated elements. Those elements must be relevant for calculating the personnel costs, reasonable and correspond to objective and verifiable information;

and

- the hourly rate is calculated using the number of annual productive hours (see above).

B. Direct costs of subcontracting (not covered by Point F) (including related duties, taxes and charges such as non-deductible value added tax (VAT) paid by the beneficiary) are eligible if the conditions in Article 13.1.1 are met.

Subcontracting costs **for providing trans-national access to research infrastructure** are eligible only if also the conditions set out in Article 16.1.1 are met.

C. Direct costs of providing financial support to third parties (not covered by Point F)

Not applicable

D. Other direct costs (not covered by Point F)

D.1 **Travel costs and related subsistence allowances** (including related duties, taxes and charges such as non-deductible value added tax (VAT) paid by the beneficiary) are eligible if they are in line with the beneficiary's usual practices on travel.

Travel costs **for providing trans-national access to research infrastructure** are eligible only if also the conditions set out in Article 16.1.1 are met.

D.2 The **depreciation costs of equipment, infrastructure or other assets** (new or second-hand) as recorded in the beneficiary's accounts are eligible, if they were purchased in accordance with Article 10.1.1 and written off in accordance with international accounting standards and the beneficiary's usual accounting practices.

The **costs of renting or leasing** equipment, infrastructure or other assets (including related duties, taxes and charges such as non-deductible value added tax (VAT) paid by the beneficiary) are also eligible, if they do not exceed the depreciation costs of similar equipment, infrastructure or assets and do not include any financing fees.

The costs of equipment, infrastructure or other assets **contributed in-kind against payment** are eligible, if they do not exceed the depreciation costs of similar equipment, infrastructure or assets, do not include any financing fees and if the conditions in Article 11.1 are met.

The only portion of the costs that will be taken into account is that which corresponds to the duration of the action and rate of actual use for the purposes of the action.

As an exception, the beneficiaries must not declare such costs (i.e. costs of renting, leasing, purchasing depreciable equipment, infrastructure and other assets) for providing trans-national access to research infrastructure (see Article 16.1).

D.3 **Costs of other goods and services** (including related duties, taxes and charges such as non-deductible value added tax (VAT) paid by the beneficiary) are eligible, if they are:

(a) purchased specifically for the action and in accordance with Article 10.1.1 or

(b) contributed in kind against payment and in accordance with Article 11.1.

Such goods and services include, for instance, consumables and supplies, dissemination (including open access), protection of results, certificates on the financial statements (if they are required by the Agreement), certificates on the methodology, translations and publications.

Costs of other goods and services **for providing trans-national access to research infrastructure** are eligible only if also the conditions set out in Article 16.1.1 are met.

D.4 **Capitalised and operating costs of 'large research infrastructure'**[2]: Not applicable

E. Indirect costs (not covered by Point F)

Indirect costs are eligible if they are declared on the basis of the flat-rate of 25% of the eligible direct costs (see Article 5.2 and Points A to D above), from which are excluded:

(a) costs of subcontracting and

(b) costs of in-kind contributions provided by third parties which are not used on the beneficiary's premises;

(c) not applicable;

(d) unit costs under Articles 5.2(f) and 6.2.F.

Beneficiaries receiving an operating grant[4] financed by the EU or Euratom budget cannot declare indirect costs for the period covered by the operating grant.

F. 'Costs for providing trans-national access to research infrastructure'

'Costs for providing trans-national access to research infrastructure' are eligible if they correspond to the amount per unit set out in Annex 2a multiplied by the number of actual units and if the conditions set out in Article 16.1 are met

[2] '**Large research infrastructure**' means research infrastructure of a total value of at least EUR 20 million, for a beneficiary, calculated as the sum of historical asset values of each individual research infrastructure of that beneficiary, as they appear in its last closed balance sheet before the date of the signature of the Agreement or as determined on the basis of the rental and leasing costs of the research infrastructure.

[4] For the definition, see Article 121(1)(b) of Regulation (EU, Euratom) No 966/2012 of the European Parliament and of the Council of 25 October 2012 on the financial rules applicable to the general budget of the Union and repealing Council Regulation (EC, Euratom) No 1605/2002 ('**Financial Regulation No 966/2012**')(OJ L 218, 26.10.2012, p.1): '**operating grant**' means direct financial contribution, by way of donation, from the budget in order to finance the functioning of a body which pursues an aim of general EU interest or has an objective forming part of and supporting an EU policy.

6.3 Conditions for costs of linked third parties to be eligible

Not applicable

6.4 Conditions for in-kind contributions provided by third parties free of charge to be eligible

In-kind contributions provided free of charge are eligible direct costs (for the beneficiary), if the costs incurred by the third party fulfil — *mutatis mutandis* — the general and specific conditions for eligibility set out in this Article (Article 6.1 and 6.2) and Article 12.1.

6.5 Ineligible costs

'**Ineligible costs**' are:

(a) costs that do not comply with the conditions set out above (Article 6.1 to 6.4), in particular:

(i) costs related to return on capital;

(ii) debt and debt service charges;

(iii) provisions for future losses or debts;

(iv) interest owed;

(v) doubtful debts;

(vi) currency exchange losses;

(vii) bank costs charged by the beneficiary's bank for transfers from the Commission;

(viii) excessive or reckless expenditure;

(ix) deductible VAT;

(x) costs incurred during suspension of the implementation of the action (see Article 49);

(b) costs declared under another EU or Euratom grant (including grants awarded by a Member State and financed by the EU or Euratom budget and grants awarded by bodies other than the Commission for the purpose of implementing the EU or Euratom budget); in particular, indirect costs if the beneficiary is already receiving an operating grant financed by the EU or Euratom budget in the same period.

6.6 Consequences of declaration of ineligible costs

Declared costs that are ineligible will be rejected (see Article 42).

This may also lead to any of the other measures described in Chapter 6.

CHAPTER 4 RIGHTS AND OBLIGATIONS OF THE PARTIES

SECTION 1 RIGHTS AND OBLIGATIONS RELATED TO IMPLEMENTING THE ACTION

ARTICLE 7 — GENERAL OBLIGATION TO PROPERLY IMPLEMENT THE ACTION

7.1 General 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 and all legal obligations under applicable EU, international and national law.

7.2 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43).

Such breaches may also lead to any of the other measures described in Chapter 6.

ARTICLE 8 — RESOURCES TO IMPLEMENT THE ACTION — THIRD PARTIES INVOLVED IN THE ACTION

The beneficiaries must have the appropriate resources to implement the action.

If it is necessary to implement the action, the beneficiaries may:

- purchase goods, works and services (see Article 10);
- use in-kind contributions provided by third parties against payment (see Article 11);
- use in-kind contributions provided by third parties free of charge (see Article 12);
- call upon subcontractors to implement action tasks described in Annex 1 (see Article 13);
- call upon linked third parties to implement action tasks described in Annex 1 (see Article 14).

In these cases, the beneficiaries retain sole responsibility towards the Commission and the other beneficiaries for implementing the action.

ARTICLE 9 — IMPLEMENTATION OF ACTION TASKS BY BENEFICIARIES NOT RECEIVING EU FUNDING

Not applicable

ARTICLE 10 — PURCHASE OF GOODS, WORKS OR SERVICES

10.1 Rules for purchasing goods, works or services

10.1.1 If necessary to implement the action, the beneficiaries may purchase goods, works or services.

The beneficiaries must make such purchases ensuring the best value for money or, if appropriate, the lowest price. In doing so, they must avoid any conflict of interests (see Article 35).

The beneficiaries must ensure that the Commission, the European Court of Auditors (ECA) and the European Anti-Fraud Office (OLAF) can exercise their rights under Articles 22 and 23 also towards their contractors.

10.1.2 Beneficiaries that are 'contracting authorities' within the meaning of Directives 2004/18/EC[5] (or 2014/24/EC[6]) or 'contracting entities' within the meaning of Directive 2004/17/EC[7] (or 2014/25/EC[8]) must comply with the applicable national law on public procurement.

10.2 Consequences of non-compliance

If a beneficiary breaches any of its obligations under Article 10.1.1, the costs related to the contract concerned will be ineligible (see Article 6) and will be rejected (see Article 42).

If a beneficiary breaches any of its obligations under Article 10.1.2, the grant may be reduced (see Article 43).

Such breaches may also lead to any of the other measures described in Chapter 6.

ARTICLE 11 — USE OF IN-KIND CONTRIBUTIONS PROVIDED BY THIRD PARTIES AGAINST PAYMENT

11.1 Rules for the use of in-kind contributions against payment

If necessary to implement the action, the beneficiaries may use in-kind contributions provided by third parties against payment.

The beneficiaries may declare costs related to the payment of in-kind contributions as eligible (see Article 6.1 and 6.2), up to the third parties' costs for the seconded persons, contributed equipment, infrastructure or other assets or other contributed goods and services.

The third parties and their contributions must be set out in Annex 1. The Commission may however approve in-kind contributions not set out in Annex 1 without amendment (see Article 55), if:

- they are specifically justified in the periodic technical report and
- their use does not entail changes to the Agreement which would call into question the decision awarding the grant or breach the principle of equal treatment of applicants.

The beneficiaries must ensure that the Commission, the European Court of Auditors (ECA) and the European Anti-Fraud Office (OLAF) can exercise their rights under Articles 22 and 23 also towards the third parties.

11.2 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the costs related to the payment of the in-kind contribution will be ineligible (see Article 6) and will be rejected (see Article 42).

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[5] Directive 2004/18/EC of the European Parliament and of the Council of 31 March 2004 on the coordination of procedures for the award of public work contracts, public supply contracts and public service contracts (OJ L 134, 30.04.2004, p. 114).

[6] Directive 2014/24/EU of the European Parliament and of the Council of 26 February 2014 on public procurement and repealing Directive 2004/18/EC. (OJ L 94, 28.03.2014, p. 65).

[7] Directive 2004/17/EC of the European Parliament and of the Council of 31 March 2004 coordinating the procurement procedures of entities operating in the water, energy, transport and postal services sectors (OJ L 134, 30.04.2004, p. 1)

[8] Directive 2014/25/EU of the European Parliament and of the Council of 26 February 2014 on procurement by entities operating in the water, energy, transport and postal services sectors and repealing Directive 2004/17/EC (OJ L 94, 28.03.2014, p. 243).

Such breaches may also lead to any of the other measures described in Chapter 6.

ARTICLE 12 — USE OF IN-KIND CONTRIBUTIONS PROVIDED BY THIRD PARTIES FREE OF CHARGE

12.1 Rules for the use of in-kind contributions free of charge

If necessary to implement the action, the beneficiaries may use in-kind contributions provided by third parties free of charge.

The beneficiaries may declare costs incurred by the third parties for the seconded persons, contributed equipment, infrastructure or other assets or other contributed goods and services as eligible in accordance with Article 6.4.

The third parties and their contributions must be set out in Annex 1. The Commission may however approve in-kind contributions not set out in Annex 1 without amendment (see Article 55), if:

- they are specifically justified in the periodic technical report and

- their use does not entail changes to the Agreement which would call into question the decision awarding the grant or breach the principle of equal treatment of applicants.

The beneficiaries must ensure that the Commission, the European Court of Auditors (ECA) and the European Anti-Fraud Office (OLAF) can exercise their rights under Articles 22 and 23 also towards the third parties.

12.2 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the costs incurred by the third parties related to the in-kind contribution will be ineligible (see Article 6) and will be rejected (see Article 42).

Such breaches may also lead to any of the other measures described in Chapter 6.

ARTICLE 13 — IMPLEMENTATION OF ACTION TASKS BY SUBCONTRACTORS

13.1 Rules for subcontracting action tasks

13.1.1 If necessary to implement the action, the beneficiaries may award subcontracts covering the implementation of certain action tasks described in Annex 1.

Subcontracting may cover only a limited part of the action.

The beneficiaries must award the subcontracts ensuring the best value for money or, if appropriate, the lowest price. In doing so, they must avoid any conflict of interests (see Article 35).

The tasks to be implemented and the estimated cost for each subcontract must be set out in Annex 1 and the total estimated costs of subcontracting per beneficiary must be set out in Annex 2. The Commission may however approve subcontracts not set out in Annex 1 and 2 without amendment (see Article 55), if:

- they are specifically justified in the periodic technical report and

- they do not entail changes to the Agreement which would call into question the decision awarding the grant or breach the principle of equal treatment of applicants.

The beneficiaries must ensure that the Commission, the European Court of Auditors (ECA) and the European Anti-Fraud Office (OLAF) can exercise their rights under Articles 22 and 23 also towards their subcontractors.

13.1.2 The beneficiaries must ensure that their obligations under Articles 35, 36, 38 and 46 also apply to the subcontractors.

Beneficiaries that are 'contracting authorities' within the meaning of Directive 2004/18/EC (or 2014/24/EU) or 'contracting entities' within the meaning of Directive 2004/17/EC (or 2014/25/EU) must comply with the applicable national law on public procurement.

13.2 Consequences of non-compliance

If a beneficiary breaches any of its obligations under Article 13.1.1, the costs related to the subcontract concerned will be ineligible (see Article 6) and will be rejected (see Article 42).

If a beneficiary breaches any of its obligations under Article 13.1.2, the grant may be reduced (see Article 43).

Such breaches may also lead to any of the other measures described in Chapter 6.

ARTICLE 14 — IMPLEMENTATION OF ACTION TASKS BY LINKED THIRD PARTIES

Not applicable

ARTICLE 15 — FINANCIAL SUPPORT TO THIRD PARTIES

15.1 Rules for providing financial support to third parties

Not applicable

15.2 Financial support in the form of prizes

Not applicable

15.3 Consequences of non-compliance

Not applicable

ARTICLE 16 — PROVISION OF TRANS-NATIONAL OR VIRTUAL ACCESS TO RESEARCH INFRASTRUCTURE

16.1 Rules for providing trans-national access to research infrastructure

16.1.1 '**Access providers**'[12] must provide access to research infrastructure or installations[13] in accordance with the following conditions:

[12] '**Access provider**' means a beneficiary or linked third party that is in charge of providing access to one or more research infrastructures or installations, or part of them, as described in Annex 1.

(a) access which must be provided:

The access must be free of charge, trans-national access to research infrastructure or installations for selected user-groups.

This access must include the logistical, technological and scientific support and the specific training that is usually provided to external researchers using the infrastructure.

(b) categories of users that may have access:

Trans-national access must be provided to selected '**user-groups**', i.e. teams of one or more researchers (users) led by a '**user group leader**'.

The user group leader and the majority of the users must work in a country other than the country(ies) where the installation is located.

This rule does not apply:

- if access is provided by an International organisation, the Joint Research Centre (JRC), an ERIC or similar legal entities;

- in case of remote access to a set of installations located in different countries offering the same type of service.

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 or 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;

(c) 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 a **selection panel** set up by the access providers.

The selection panel must be composed of international experts in the field, at least half of them independent from the beneficiaries, unless otherwise specified in Annex 1.

The selection panel must assess all proposals received and recommend a short-list of the user groups that should benefit from access.

The selection panel must base its 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.

[13] '**Installation**' means a part of a service or a research infrastructure that could be used independently from the rest. A research infrastructure consists of one or more installations.

It will apply the principles of transparency, fairness and impartiality.

(d) other conditions:

The access provider must request written approval from the Commission (see Article 52) for the selection of user groups requiring visits to the installation(s) exceeding 3 months, unless such visits are foreseen in Annex 1.

16.1.2 In addition, the access provider must:

- advertise widely, including on a dedicated website, 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 this Agreement;
- ensure that his obligations under Articles 35, 36, 38 and 46 also apply to the users.

16.2 Rules for providing virtual access to research infrastructure

Not applicable

16.3 Consequences of non-compliance

If a beneficiary breaches any of its obligations under Articles 16.1.1 and 16.2, the costs of access will be ineligible (see Article 6) and will be rejected (see Article 42).

If a beneficiary breaches any of its obligations under Articles 16.1.2, the grant may be reduced (see Article 43).

Such breaches may also lead to any of the other measures described in Chapter 6.

SECTION 2 RIGHTS AND OBLIGATIONS RELATED TO THE GRANT ADMINISTRATION

ARTICLE 17 — GENERAL OBLIGATION TO INFORM

17.1 General obligation to provide information upon request

The beneficiaries must provide — during implementation of the action or afterwards and in accordance with Article 41.2 — any information requested in order to verify eligibility of the costs, proper implementation of the action and compliance with any other obligation under the Agreement.

17.2 Obligation to keep information up to date and to inform about events and circumstances likely to affect the Agreement

Each beneficiary must keep information stored in the Participant Portal Beneficiary Register (via the electronic exchange system; see Article 52) up to date, in particular, its name, address, legal representatives, legal form and organisation type.

Each beneficiary must immediately inform the coordinator — which must immediately inform the Commission and the other beneficiaries — of any of the following:

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

(i) changes in its legal, financial, technical, organisational or ownership situation

(b) **circumstances** affecting:

(i) the decision to award the grant or

(ii) compliance with requirements under the Agreement.

17.3 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43).

Such breaches may also lead to any of the other measures described in Chapter 6.

ARTICLE 18 — KEEPING RECORDS — SUPPORTING DOCUMENTATION

18.1 Obligation to keep records and other supporting documentation

The beneficiaries must — for a period of five years after the payment of the balance — keep records and other supporting documentation in order to prove the proper implementation of the action and the costs they declare as eligible.

They must make them available upon request (see Article 17) or in the context of checks, reviews, audits or investigations (see Article 22).

If there are on-going checks, reviews, audits, investigations, litigation or other pursuits of claims under the Agreement (including the extension of findings; see Articles 22), the beneficiaries must keep the 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 Commission may accept non-original documents if it considers that they offer a comparable level of assurance.

18.1.1 Records and other supporting documentation on the scientific and technical implementation

The beneficiaries must keep records and other supporting documentation on scientific and technical implementation of the action in line with the accepted standards in the respective field.

18.1.2 Records and other documentation to support the costs declared

The beneficiaries must keep the records and documentation supporting the costs declared, in particular the following:

(a) for **actual costs**: adequate records and other supporting documentation to prove the costs declared, such as contracts, subcontracts, invoices and accounting records. In addition, the

beneficiaries' usual cost accounting practices and internal control procedures must enable direct reconciliation between the amounts declared, the amounts recorded in their accounts and the amounts stated in the supporting documentation;

(b) for **unit costs**: adequate records and other supporting documentation to prove the number of units declared. This documentation must include records of the names, nationalities, and home institutions of users, as well as the nature and quantity of access provided to them. Beneficiaries do not need to identify the actual eligible costs covered or to keep or provide supporting documentation (such as accounting statements) to prove the amount per unit.

In addition, **for direct personnel costs declared as unit costs calculated in accordance with the beneficiary's usual cost accounting practices**, the beneficiaries must keep adequate records and documentation to prove that the cost accounting practices used comply with the conditions set out in Article 6.2, Point A.

The beneficiaries may submit to the Commission, for approval, a certificate (drawn up in accordance with Annex 6) stating that their usual cost accounting practices comply with these conditions ('**certificate on the methodology**'). If the certificate is approved, costs declared in line with this methodology will not be challenged subsequently, unless the beneficiaries have concealed information for the purpose of the approval.

(c) for **flat-rate costs**: adequate records and other supporting documentation to prove the eligibility of the costs to which the flat-rate is applied. The beneficiaries do not need to identify the costs covered or provide supporting documentation (such as accounting statements) to prove the amount declared at a flat-rate.

In addition, for **personnel costs** (declared as actual costs or on the basis of unit costs), the beneficiaries must keep **time records** for the number of hours declared. The time records must be in writing and approved by the persons working on the action and their supervisors, at least monthly. In the absence of reliable time records of the hours worked on the action, the Commission may accept alternative evidence supporting the number of hours declared, if it considers that it offers an adequate level of assurance.

As an exception, for **persons working exclusively on the action**, there is no need to keep time records, if the beneficiary signs a **declaration** confirming that the persons concerned have worked exclusively on the action.

18.2 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, costs insufficiently substantiated will be ineligible (see Article 6) and will be rejected (see Article 42), and the grant may be reduced (see Article 43).

Such breaches may also lead to any of the other measures described in Chapter 6.

ARTICLE 19 — SUBMISSION OF DELIVERABLES

19.1 Obligation to submit deliverables

The coordinator must submit the '**deliverables**' identified in Annex 1, in accordance with the timing and conditions set out in it.

19.2 Consequences of non-compliance

If the coordinator breaches any of its obligations under this Article, the Commission may apply any of the measures described in Chapter 6.

ARTICLE 20 — REPORTING — PAYMENT REQUESTS

20.1 Obligation to submit reports

The coordinator must submit to the Commission (see Article 52) the technical and financial reports set out in this Article. These reports include requests for payment and must be drawn up using the forms and templates provided in the electronic exchange system (see Article 52).

20.2 Reporting periods

The action is divided into the following '**reporting periods**':

- RP1: from month 1 to month 18
- RP2: from month 19 to month 36

20.3 Periodic reports — Requests for interim payments

The coordinator must submit a periodic report within 60 days following the end of each reporting period.

The **periodic report** must include the following:

(a) a '**periodic technical report**' containing:

(i) an **explanation of the work carried out** by the beneficiaries;

(ii) an **overview of the progress** towards the objectives of the action, including milestones and deliverables identified in Annex 1.

This report must include explanations justifying the differences between work expected to be carried out in accordance with Annex 1 and that actually carried out.

The report must detail the exploitation and dissemination of the results and — if required in Annex 1 — an updated '**plan for the exploitation and dissemination of the results**'.

The report must indicate the communication activities;

The report must detail the access activity, indicating the members of the selection panel, the selection procedure, the exact amount of access provided to the user groups, the description of their work, and information on the users (including names, nationality and home institutions).

(iii) a **summary** for publication by the Commission;

(iv) the answers to the '**questionnaire**', covering issues related to the action implementation and the economic and societal impact, notably in the context of the Horizon 2020 key performance indicators and the Horizon 2020 monitoring requirements;

(b) a '**periodic financial report**' containing:

(i) an '**individual financial statement**' (see Annex 4) from each beneficiary, for the reporting period concerned.

The individual financial statement must detail the eligible costs (actual costs, unit costs and flat-rate costs; see Article 6) for each budget category (see Annex 2).

The beneficiaries must declare all eligible costs, even if — for actual costs, unit costs and flat-rate costs — they exceed the amounts indicated in the estimated budget (see Annex 2). Amounts which are not declared in the individual financial statement will not be taken into account by the Commission.

If an individual financial statement is not submitted for a reporting period, it may be included in the periodic financial report for the next reporting period.

The individual financial statements of the last reporting period must also detail the **receipts of the action** (see Article 5.3.3).

Each beneficiary must **certify** that:

- the information provided is full, reliable and true;
- the costs declared are eligible (see Article 6);
- the costs can be substantiated by adequate records and supporting documentation (see Article 18) that will be produced upon request (see Article 17) or in the context of checks, reviews, audits and investigations (see Article 22), and
- for the last reporting period: that all the receipts have been declared (see Article 5.3.3);

(ii) an **explanation of the use of resources** and the information on subcontracting (see Article 13) and in-kind contributions provided by third parties (see Articles 11 and 12) from each beneficiary, for the reporting period concerned;

(iii) not applicable;

(iv) a '**periodic summary financial statement**', created automatically by the electronic exchange system, consolidating the individual financial statements for the reporting period concerned and including — except for the last reporting period — the **request for interim payment**.

20.4 Final report — Request for payment of the balance

In addition to the periodic report for the last reporting period, the coordinator must submit the final report within 60 days following the end of the last reporting period.

The **final report** must include the following:

(a) a '**final technical report**' with a **summary** for publication containing:

(i) an overview of the results and their exploitation and dissemination;

(ii) the conclusions on the action, and

(iii) the socio-economic impact of the action;

(b) a '**final financial report**' containing:

(i) a '**final summary financial statement**', created automatically by the electronic exchange system, consolidating the individual financial statements for all reporting periods and including the **request for payment of the balance** and

(ii) a '**certificate on the financial statements**' (drawn up in accordance with Annex 5) for each beneficiary , if it requests a total contribution of EUR 325 000 or more, as reimbursement of actual costs and unit costs calculated on the basis of its usual cost accounting practices (see Article 5.2 and Article 6.2, Point A).

20.5 Information on cumulative expenditure incurred

Not applicable

20.6 Currency for financial statements and conversion into euro

Financial statements must be drafted in euro.

Beneficiaries with accounting established in a currency other than the euro must convert the costs recorded in their accounts into euro, at the average of the daily exchange rates published in the C series of the *Official Journal of the European Union*, calculated over the corresponding reporting period.

If no daily euro exchange rate is published in the *Official Journal of the European Union* for the currency in question, they must be converted at the average of the monthly accounting rates published on the Commission's website, calculated over the corresponding reporting period.

Beneficiaries with accounting established in euro must convert costs incurred in another currency into euro according to their usual accounting practices.

20.7 Language of reports

All reports (technical and financial reports, including financial statements) must be submitted in the language of the Agreement.

20.8 Consequences of non-compliance

If the reports submitted do not comply with this Article, the Commission may suspend the payment deadline (see Article 47) and apply any of the other measures described in Chapter 6.

If the coordinator breaches its obligation to submit the reports and if it fails to comply with this obligation within 30 days following a written reminder, the Commission may terminate the Agreement (see Article 50) or apply any of the other measures described in Chapter 6.

ARTICLE 21 — PAYMENTS AND PAYMENT ARRANGEMENTS

21.1 Payments to be made

The following payments will be made to the coordinator:

- one **pre-financing payment**;
- one or more **interim payments**, on the basis of the request(s) for interim payment (see Article 20), and
- one **payment of the balance**, on the basis of the request for payment of the balance (see Article 20).

21.2 Pre-financing payment — Amount — Amount retained for the Guarantee Fund

The aim of the pre-financing is to provide the beneficiaries with a float.

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

The amount of the pre-financing payment will be EUR **3,106,712.00** (three million one hundred and six thousand seven hundred and twelve EURO).

The Commission will — except if Article 48 applies — make the pre-financing payment to the coordinator within 30 days, either from the entry into force of the Agreement (see Article 58) or from 10 days before the starting date of the action (see Article 3), whichever is the latest.

An amount of EUR **194,169.50** (one hundred and ninety four thousand one hundred and sixty nine EURO and fifty eurocents), corresponding to 5% of the maximum grant amount (see Article 5.1), is retained by the Commission from the pre-financing payment and transferred into the '**Guarantee Fund**'.

21.3 Interim payments — Amount — Calculation

Interim payments reimburse the eligible costs incurred for the implementation of the action during the corresponding reporting periods.

The Commission will pay to the coordinator the amount due as interim payment within 90 days from receiving the periodic report (see Article 20.3), except if Articles 47 or 48 apply.

Payment is subject to the approval of the periodic report. Its approval does not imply recognition of the compliance, authenticity, completeness or correctness of its content.

The **amount due as interim payment** is calculated by the Commission in the following steps:

Step 1 – Application of the reimbursement rates

Step 2 – Limit to 90% of the maximum grant amount

21.3.1 Step 1 — Application of the reimbursement rates

The reimbursement rate(s) (see Article 5.2) are applied to the eligible costs (actual costs, unit costs and flat-rate costs ; see Article 6) declared by the beneficiaries (see Article 20) and approved by the Commission (see above) for the concerned reporting period.

21.3.2 Step 2 — Limit to 90% of the maximum grant amount

The total amount of pre-financing and interim payments must not exceed 90% of the maximum grant amount set out in Article 5.1. The maximum amount for the interim payment will be calculated as follows:

{90% of the maximum grant amount (see Article 5.1)

minus

{pre-financing and previous interim payments}}.

21.4 Payment of the balance — Amount — Calculation — Release of the amount retained for the Guarantee Fund

The payment of the balance reimburses the remaining part of the eligible costs incurred by the beneficiaries for the implementation of the action.

If the total amount of earlier payments is greater than the final grant amount (see Article 5.3), the payment of the balance takes the form of a recovery (see Article 44).

If the total amount of earlier payments is lower than the final grant amount, the Commission will pay the balance within 90 days from receiving the final report (see Article 20.4), except if Articles 47 or 48 apply.

Payment is subject to the approval of the final report. Its approval does not imply recognition of the compliance, authenticity, completeness or correctness of its content.

The **amount due as the balance** is calculated by the Commission by deducting the total amount of pre-financing and interim payments (if any) already made, from the final grant amount determined in accordance with Article 5.3:

{final grant amount (see Article 5.3)

minus

{pre-financing and interim payments (if any) made}}.

At the payment of the balance, the amount retained for the Guarantee Fund (see above) will be released and:

- if the balance is positive: the amount released will be paid in full to the coordinator together with the amount due as the balance;
- if the balance is negative (payment of the balance taking the form of recovery): it will be deducted from the amount released (see Article 44.1.2). If the resulting amount:
    - is positive, it will be paid to the coordinator
    - is negative, it will be recovered.

The amount to be paid may however be offset — without the beneficiaries' consent — against any other amount owed by a beneficiary to the Commission or an executive agency (under the EU or Euratom budget), up to the maximum EU contribution indicated, for that beneficiary, in the estimated budget (see Annex 2).

21.5 Notification of amounts due

When making payments, the Commission will formally notify to the coordinator the amount due, specifying whether it concerns an interim payment or the payment of the balance.

For the payment of the balance, the notification will also specify the final grant amount.

In the case of reduction of the grant or recovery of undue amounts, the notification will be preceded by the contradictory procedure set out in Articles 43 and 44.

21.6 Currency for payments

The Commission will make all payments in euro.

21.7 Payments to the coordinator — Distribution to the beneficiaries

Payments will be made to the coordinator.

Payments to the coordinator will discharge the Commission from its payment obligation.

The coordinator must distribute the payments between the beneficiaries without unjustified delay.

Pre-financing may however be distributed only:

(a) if the minimum number of beneficiaries set out in the call for proposals has acceded to the Agreement (see Article 56) and

(b) to beneficiaries that have acceded to the Agreement (see Article 56).

21.8 Bank account for payments

All payments will be made to the following bank account:

Name of bank: SOCIETE GENERALE
Full name of the account holder: GANIL GIE
Full account number (including bank codes): ()
IBAN code: FR7630003004510002008320469

21.9 Costs of payment transfers

The cost of the payment transfers is borne as follows:

- the Commission 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.

21.10 Date of payment

Payments by the Commission are considered to have been carried out on the date when they are debited to its account.

21.11 Consequences of non-compliance

21.11.1 If the Commission does not pay within the payment deadlines (see above), the beneficiaries are entitled to **late-payment interest** at the rate applied by the European Central Bank (ECB) for its main refinancing operations in euros ('reference rate'), plus three and a half points. The reference rate 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 upon 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).

Suspension of the payment deadline or payments (see Articles 47 and 48) will not be considered as late payment.

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.

21.11.2 If the coordinator breaches any of its obligations under this Article, the grant may be reduced (see Article 43) and the Agreement or the participation of the coordinator may be terminated (see Article 50).

Such breaches may also lead to any of the other measures described in Chapter 6.

ARTICLE 22 — CHECKS, REVIEWS, AUDITS AND INVESTIGATIONS — EXTENSION OF FINDINGS

22.1 Checks, reviews and audits by the Commission

22.1.1 Right to carry out checks

The Commission will — during the implementation of the action or afterwards — check the proper implementation of the action and compliance with the obligations under the Agreement, including assessing deliverables and reports.

For this purpose the Commission may be assisted by external persons or bodies.

The Commission may also request additional information in accordance with Article 17. The Commission may request beneficiaries to provide such information to it directly.

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

22.1.2 Right to carry out reviews

The Commission may — during the implementation of the action or afterwards — carry out reviews on the proper implementation of the action (including assessment of deliverables and reports), compliance with the obligations under the Agreement and continued scientific or technological relevance of the action.

Reviews may be started **up to two years after the payment of the balance**. They will be formally notified to the coordinator or beneficiary concerned and will be considered to have started on the date of the formal notification.

If the review is carried out on a third party (see Articles 10 to 16), the beneficiary concerned must inform the third party.

The Commission may carry out reviews directly (using its own staff) or indirectly (using external persons or bodies appointed to do so). It will inform the coordinator or beneficiary concerned of the identity of the external persons or bodies. They have the right to object to the appointment on grounds of commercial confidentiality.

The coordinator or beneficiary concerned must provide — within the deadline requested — any information and data in addition to deliverables and reports already submitted (including information on the use of resources). The Commission may request beneficiaries to provide such information to it directly.

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

For **on-the-spot** reviews, the beneficiaries must allow access to their sites and premises, including to external persons or bodies, 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 '**review report**' will be drawn up.

The Commission will formally notify the review report to the coordinator or beneficiary concerned, which has 30 days to formally notify observations ('**contradictory review procedure**').

Reviews (including review reports) are in the language of the Agreement.

22.1.3 Right to carry out audits

The Commission may — during the implementation of the action or afterwards — carry out audits on the proper implementation of the action and compliance with the obligations under the Agreement.

Audits may be started **up to two years after the payment of the balance**. They will be formally notified to the coordinator or beneficiary concerned and will be considered to have started on the date of the formal notification.

If the audit is carried out on a third party (see Articles 10 to 16), the beneficiary concerned must inform the third party.

The Commission may carry out audits directly (using its own staff) or indirectly (using external persons or bodies appointed to do so). It will inform the coordinator or beneficiary concerned of the identity of the external persons or bodies. They have the right to object to the appointment on grounds of commercial confidentiality.

The coordinator or beneficiary concerned must provide — within the deadline requested — any information (including complete accounts, individual salary statements or other personal data) to verify compliance with the Agreement. The Commission may request beneficiaries to provide such information to it directly.

For **on-the-spot** audits, the beneficiaries must allow access to their sites and premises, including to external persons or bodies, 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 Commission will formally notify the draft audit report to the coordinator or beneficiary concerned, which has 30 days to formally notify observations ('**contradictory audit procedure**'). This period may be extended by the Commission in justified cases.

The '**final audit report**' will take into account observations by the coordinator or beneficiary concerned. The report will be formally notified to it.

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

The Commission may also access the beneficiaries' statutory records for the periodical assessment of unit costs or flat-rate amounts.

22.2 Investigations by the European Anti-Fraud Office (OLAF)

Under Regulations No 883/2013[14] and No 2185/96[15] (and in accordance with their provisions and procedures), the European Anti-Fraud Office (OLAF) may — at any moment during implementation of the action or afterwards — carry out investigations, including on-the-spot checks and inspections, to establish whether there has been fraud, corruption or any other illegal activity affecting the financial interests of the EU.

22.3 Checks and audits by the European Court of Auditors (ECA)

Under Article 287 of the Treaty on the Functioning of the European Union (TFEU) and Article 161 of the Financial Regulation No 966/2012[16], the European Court of Auditors (ECA) may — at any moment during implementation of the action or afterwards — carry out audits.

The ECA has the right of access for the purpose of checks and audits.

22.4 Checks, reviews, audits and investigations for international organisations

Not applicable

22.5 Consequences of findings in checks, reviews, audits and investigations — Extension of findings

22.5.1 Findings in this grant

Findings in checks, reviews, audits or investigations carried out in the context of this grant may lead to the rejection of ineligible costs (see Article 42), reduction of the grant (see Article 43), recovery of undue amounts (see Article 44) or to any of the other measures described in Chapter 6.

[14] 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).

[15] Council Regulation (Euratom, EC) No 2185/1996 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).

[16] Regulation (EU, Euratom) No 966/2012 of the European Parliament and of the Council of 25 October 2012 on the financial rules applicable to the general budget of the Union and repealing Council Regulation (EC, Euratom) No 1605/2002 (OJ L 298, 26.10.2012, p. 1).

Rejection of costs or reduction of the grant after the payment of the balance will lead to a revised final grant amount (see Article 5.4).

Findings in checks, reviews, audits or investigations may lead to a request for amendment for the modification of Annex 1 (see Article 55).

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

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

22.5.2 Findings in other grants

The Commission may extend findings from other grants to this grant ('**extension of findings from other grants to this grant**'), if:

(a) the beneficiary concerned is found, in other EU or Euratom 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 — no later than two years after the payment of the balance of this grant.

The extension of findings may lead to the rejection of costs (see Article 42), reduction of the grant (see Article 43), recovery of undue amounts (see Article 44), suspension of payments (see Article 48), suspension of the action implementation (see Article 49) or termination (see Article 50).

22.5.3 Procedure

The Commission will formally notify the beneficiary concerned the systemic or recurrent errors and its intention to extend these audit findings, together with the list of grants affected.

22.5.3.1 If the findings concern **eligibility of costs**: the formal 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 by the Commission 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.

The beneficiary concerned has 90 days from receiving notification to submit observations, revised financial statements or to propose a duly substantiated **alternative correction method**. This period may be extended by the Commission in justified cases.

The Commission may then start a rejection procedure in accordance with Article 42, on the basis of:

- the revised financial statements, if approved;

- the proposed alternative correction method, if accepted

or

- the initially notified correction rate for extrapolation, if it does not receive any observations or revised financial statements, does not accept the observations or the proposed alternative correction method or does not approve the revised financial statements.

22.5.3.2 If the findings concern **substantial errors**, **irregularities or fraud** or **serious breach of obligations**: the formal notification will include:

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

(b) the flat-rate the Commission intends to apply according to the principle of proportionality.

The beneficiary concerned has 90 days from receiving notification to submit observations or to propose a duly substantiated alternative flat-rate.

The Commission may then start a reduction procedure in accordance with Article 43, on the basis of:

- the proposed alternative flat-rate, if accepted

or

- the initially notified flat-rate, if it does not receive any observations or does not accept the observations or the proposed alternative flat-rate.

22.6 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, any insufficiently substantiated costs will be ineligible (see Article 6) and will be rejected (see Article 42).

Such breaches may also lead to any of the other measures described in Chapter 6.

ARTICLE 23 — EVALUATION OF THE IMPACT OF THE ACTION

23.1 Right to evaluate the impact of the action

The Commission may carry out interim and final evaluations of the impact of the action measured against the objective of the EU programme.

Evaluations may be started during implementation of the action and up to five years after the payment of the balance. The evaluation is considered to start on the date of the formal notification to the coordinator or beneficiaries.

The Commission may make these evaluations directly (using its own staff) or indirectly (using external bodies or persons it has authorised to do so).

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

23.2 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the Commission may apply the measures described in Chapter 6.

SECTION 3 RIGHTS AND OBLIGATIONS RELATED TO BACKGROUND AND RESULTS

SUBSECTION 1 GENERAL

ARTICLE 23a — MANAGEMENT OF INTELLECTUAL PROPERTY

23a.1 Obligation to take measures to implement the Commission Recommendation on the management of intellectual property in knowledge transfer activities

Beneficiaries that are universities or other public research organisations must take measures to implement the principles set out in Points 1 and 2 of the Code of Practice annexed to the Commission Recommendation on the management of intellectual property in knowledge transfer activities[17].

This does not change the obligations set out in Subsections 2 and 3 of this Section.

The beneficiaries must ensure that researchers and third parties involved in the action are aware of them.

23a.2 Consequences of non-compliance

If a beneficiary breaches its obligations under this Article, the Commission may apply any of the measures described in Chapter 6.

SUBSECTION 2 RIGHTS AND OBLIGATIONS RELATED TO BACKGROUND

ARTICLE 24 — AGREEMENT ON BACKGROUND

24.1 Agreement on background

The beneficiaries must identify and agree (in writing) on the background for the action ('**agreement on background**').

'**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:

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

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

[17] Commission Recommendation C(2008) 1329 of 10.4.2008 on the management of intellectual property in knowledge transfer activities and the Code of Practice for universities and other public research institutions attached to this recommendation.

24.2 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43).

Such breaches may also lead to any of the other measures described in Chapter 6.

ARTICLE 25 — ACCESS RIGHTS TO BACKGROUND

25.1 Exercise of access rights — Waiving of access rights — No sub-licensing

To exercise access rights, this must first be requested in writing ('**request for access**').

'**Access rights**' means rights to use results or background under the terms and conditions laid down in this Agreement.

Waivers of access rights are not valid unless in writing.

Unless agreed otherwise, access rights do not include the right to sub-license.

25.2 Access rights for other beneficiaries, for implementing their own tasks under the action

The beneficiaries must give 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 —:

(a) informed the other beneficiaries that access to its background is subject to legal restrictions or limits, including those imposed by the rights of third parties (including personnel), or

(b) agreed with the other beneficiaries that access would not be on a royalty-free basis.

25.3 Access rights for other beneficiaries, for exploiting their own results

The beneficiaries must give each other access — under fair and reasonable conditions — to background needed for exploiting their own 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 legal restrictions or limits, including those imposed by the rights of third parties (including personnel).

'**Fair and reasonable conditions**' means 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.

Requests for access may be made — unless agreed otherwise — up to one year after the period set out in Article 3.

25.4 Access rights for affiliated entities

Unless otherwise agreed in the consortium agreement, access to background must also be given — under fair and reasonable conditions (see above; Article 25.3) and unless it is subject to legal restrictions or limits, including those imposed by the rights of third parties (including personnel) —

to affiliated entities[18] established in an EU Member State or '**associated country**'[19], if this is needed to exploit the results generated by the beneficiaries to which they are affiliated.

Unless agreed otherwise (see above; Article 25.1), the affiliated entity concerned must make the request directly to the beneficiary that holds the background.

Requests for access may be made — unless agreed otherwise — up to one year after the period set out in Article 3.

25.5 Access rights for third parties

The access provider must — unless it is subject to legal restrictions or limits, including those imposed by the rights of third parties (including personnel) — give users royalty-free access to background needed to implement the action.

The access provider must inform the users as soon as possible of any restriction which might substantially affect the granting of access rights.

25.6 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43).

Such breaches may also lead to any of the other measures described in Chapter 6.

SUBSECTION 3 RIGHTS AND OBLIGATIONS RELATED TO RESULTS

ARTICLE 26 — OWNERSHIP OF RESULTS

26.1 Ownership by the beneficiary that generates the results

Results are owned by the beneficiary that generates them.

'**Results**' means any (tangible or intangible) output of the action such as data, knowledge or information — whatever its form or nature, whether it can be protected or not — that is generated in the action, as well as any rights attached to it, including intellectual property rights.

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[18] For the definition, see Article 2.1(2) of the Rules for Participation Regulation No 1290/2013: '**affiliated entity**' means any legal entity that is under the direct or indirect control of a participant, or under the same direct or indirect control as the participant, or that is directly or indirectly controlling a participant.
'Control' may take any of the following forms:
(a) the direct or indirect holding of more than 50% of the nominal value of the issued share capital in the legal entity concerned, or of a majority of the voting rights of the shareholders or associates of that entity;
(b) the direct or indirect holding, in fact or in law, of decision-making powers in the legal entity concerned.
However the following relationships between legal entities shall not in themselves be deemed to constitute controlling relationships:
(a) the same public investment corporation, institutional investor or venture-capital company has a direct or indirect holding of more than 50% of the nominal value of the issued share capital or a majority of voting rights of the shareholders or associates;
(b) the legal entities concerned are owned or supervised by the same public body.

[19] For the definition, see Article 2.1(3) of the Rules for Participation Regulation No 1290/2013: '**associated country**' means a third country which is party to an international agreement with the Union, as identified in Article 7 of Horizon 2020 Framework Programme Regulation No 1291/2013. Article 7 sets out the conditions for association of non-EU countries to Horizon 2020.

26.2 Joint ownership by several beneficiaries

Two or more beneficiaries own results jointly if:

(a) they have jointly generated them and

(b) it is not possible to:

(i) establish the respective contribution of each beneficiary, or

(ii) separate them for the purpose of applying for, obtaining or maintaining their protection (see Article 27).

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, each joint owner may grant non-exclusive licences to third parties to exploit jointly-owned results (without any right to sub-license), if the other joint owners are given:

(a) at least 45 days advance notice and

(b) fair and reasonable compensation.

Once the results have been generated, joint owners may agree (in writing) to apply another regime than joint ownership (such as, for instance, transfer to a single owner (see Article 30) with access rights for the others).

26.3 Rights of third parties (including personnel)

If third parties (including personnel) may claim rights to the results, the beneficiary concerned must ensure that it complies with its obligations under the Agreement.

If a third party generates results, the beneficiary concerned must obtain all necessary rights (transfer, licences or other) from the third party, in order to be able to respect its obligations as if those results were generated by the beneficiary itself.

If obtaining the rights is impossible, the beneficiary must refrain from using the third party to generate the results.

26.4 EU ownership, to protect results

26.4.1 The EU may — with the consent of the beneficiary concerned — assume ownership of results to protect them, if a beneficiary intends — up to four years after the period set out in Article 3 — to disseminate its results without protecting them, except in any of the following cases:

(a) the lack of protection is because protecting the results is not possible, reasonable or justified (given the circumstances);

(b) the lack of protection is because there is a lack of potential for commercial or industrial exploitation, or

(c) the beneficiary intends to transfer the results to another beneficiary or third party established in an EU Member State or associated country, which will protect them.

Before the results are disseminated and unless any of the cases above under Points (a), (b) or (c) applies, the beneficiary must formally notify the Commission and at the same time inform it of any reasons for refusing consent. The beneficiary may refuse consent only if it can show that its legitimate interests would suffer significant harm.

If the Commission decides to assume ownership, it will formally notify the beneficiary concerned within 45 days of receiving notification.

No dissemination relating to these results may take place before the end of this period or, if the Commission takes a positive decision, until it has taken the necessary steps to protect the results.

26.4.2 The EU may — with the consent of the beneficiary concerned — assume ownership of results to protect them, if a beneficiary intends — up to four years after the period set out in Article 3 — to stop protecting them or not to seek an extension of protection, except in any of the following cases:

(a) the protection is stopped because of a lack of potential for commercial or industrial exploitation;

(b) an extension would not be justified given the circumstances.

A beneficiary that intends to stop protecting results or not seek an extension must — unless any of the cases above under Points (a) or (b) applies — formally notify the Commission at least 60 days before the protection lapses or its extension is no longer possible and at the same time inform it of any reasons for refusing consent. The beneficiary may refuse consent only if it can show that its legitimate interests would suffer significant harm.

If the Commission decides to assume ownership, it will formally notify the beneficiary concerned within 45 days of receiving notification.

26.5 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43).

Such breaches may also lead to the any of the other measures described in Chapter 6.

ARTICLE 27 — PROTECTION OF RESULTS — VISIBILITY OF EU FUNDING

27.1 Obligation to protect the results

Each beneficiary must examine the possibility of protecting its results and must adequately protect them — for an appropriate period and with appropriate territorial coverage — if:

(a) the results can reasonably be expected to be commercially or industrially exploited and

(b) protecting them is possible, reasonable and justified (given the circumstances).

When deciding on protection, the beneficiary must consider its own legitimate interests and the legitimate interests (especially commercial) of the other beneficiaries.

27.2 EU ownership, to protect the results

If a beneficiary intends not to protect its results, to stop protecting them or not seek an extension of protection, the EU may — under certain conditions (see Article 26.4) — assume ownership to ensure their (continued) protection.

27.3 Information on EU funding

Applications for protection of results (including patent applications) filed by or on behalf of a beneficiary must — unless the Commission requests or agrees otherwise or unless it is impossible — include the following:

> *"The project leading to this application has received funding from the* European Union's Horizon 2020 research and innovation programme *under grant agreement No 730989".*

27.4 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43).

Such a breach may also lead to any of the other measures described in Chapter 6.

ARTICLE 28 — EXPLOITATION OF RESULTS

28.1 Obligation to exploit the results

Each beneficiary must — up to four years after the period set out in Article 3 — take measures aiming to ensure '**exploitation**' of its results (either directly or indirectly, in particular through transfer or licensing; see Article 30) by:

(a) using them in further research activities (outside the action);

(b) developing, creating or marketing a product or process;

(c) creating and providing a service, or

(d) using them in standardisation activities.

This does not change the security obligations in Article 37, which still apply.

28.2 Results that could contribute to European or international standards — Information on EU funding

If results are incorporated in a standard, the beneficiary concerned must — unless the Commission requests or agrees otherwise or unless it is impossible — ask the standardisation body to include the following statement in (information related to) the standard:

> *"Results incorporated in this standard received funding from the* European Union's Horizon 2020 research and innovation programme *under grant agreement No 730989".*

28.3 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced in accordance with Article 43.

Such a breach may also lead to any of the other measures described in Chapter 6.

ARTICLE 29 — DISSEMINATION OF RESULTS — OPEN ACCESS — VISIBILITY OF EU FUNDING

29.1 Obligation to disseminate results

Unless it goes against their legitimate interests, each beneficiary must — as soon as possible — '**disseminate**' its results by disclosing them to the public by appropriate means (other than those resulting from protecting or exploiting the results), including in scientific publications (in any medium).

This does not change the obligation to protect results in Article 27, the confidentiality obligations in Article 36, the security obligations in Article 37 or the obligations to protect personal data in Article 39, all of which still apply.

A beneficiary that intends to disseminate its results must give advance notice to the other beneficiaries of — unless agreed otherwise — at least 45 days, together with sufficient information on the results it will disseminate.

Any other beneficiary may object within — unless agreed otherwise — 30 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 dissemination may not take place unless appropriate steps are taken to safeguard these legitimate interests.

If a beneficiary intends not to protect its results, it may — under certain conditions (see Article 26.4.1) — need to formally notify the Commission before dissemination takes place.

29.2 Open access to scientific publications

Each beneficiary must ensure open access (free of charge online access for any user) to all peer-reviewed scientific publications relating to its results.

In particular, it must:

(a) as soon as possible and at the latest on publication, deposit a machine-readable electronic copy of the published version or final peer-reviewed manuscript accepted for publication in a repository for scientific publications;

Moreover, the beneficiary must aim to deposit at the same time the research data needed to validate the results presented in the deposited scientific publications.

(b) ensure open access to the deposited publication — via the repository — at the latest:

(i) on publication, if an electronic version is available for free via the publisher, or

(ii) within six months of publication (twelve months for publications in the social sciences and humanities) in any other case.

(c) ensure open access — via the repository — to the bibliographic metadata that identify the deposited publication.

The bibliographic metadata must be in a standard format and must include all of the following:

- the terms "European Union (EU)" and "Horizon 2020";

- the name of the action, acronym and grant number;
- the publication date, and length of embargo period if applicable, and
- a persistent identifier.

29.3 Open access to research data

Not applicable

29.4 Information on EU funding — Obligation and right to use the EU emblem

Unless the Commission requests or agrees otherwise or unless it is impossible, any dissemination of results (in any form, including electronic) must:

(a) display the EU emblem and

(b) include the following text:

> *"This project has received funding from the* European Union's Horizon 2020 research and innovation programme *under grant agreement No 730989".*

When displayed together with another logo, the EU emblem must have appropriate prominence.

For the purposes of their obligations under this Article, the beneficiaries may use the EU emblem without first obtaining approval from the Commission.

This does not however give them the right to exclusive use.

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

29.5 Disclaimer excluding Commission responsibility

Any dissemination of results must indicate that it reflects only the author's view and that the Commission is not responsible for any use that may be made of the information it contains.

29.6 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43).

Such a breach may also lead to any of the other measures described in Chapter 6.

ARTICLE 30 — TRANSFER AND LICENSING OF RESULTS

30.1 Transfer of ownership

Each beneficiary may transfer ownership of its results.

It must however ensure that its obligations under Articles 26.2, 26.4, 27, 28, 29, 30 and 31 also apply to the new owner and that this owner has the obligation to pass them on in any subsequent transfer.

This does not change the security obligations in Article 37, which still apply.

Unless agreed otherwise (in writing) for specifically-identified third parties or unless impossible under applicable EU and national laws on mergers and acquisitions, a beneficiary that intends to transfer ownership of results must give at least 45 days advance notice (or less if agreed in writing) to the other beneficiaries that still have (or still may request) access rights to the results. This notification must include sufficient information on the new owner to enable any beneficiary concerned to assess the effects on its access rights.

Unless agreed otherwise (in writing) for specifically-identified third parties, any other beneficiary may object within 30 days of receiving notification (or less if agreed in writing), if it can show that the transfer would adversely affect its access rights. In this case, the transfer may not take place until agreement has been reached between the beneficiaries concerned.

30.2 Granting licenses

Each beneficiary may grant licences to its results (or otherwise give the right to exploit them), if:

(a) this does not impede the rights under Article 31 and

(b) not applicable.

In addition to Points (a) and (b), exclusive licences for results may be granted only if all the other beneficiaries concerned have waived their access rights (see Article 31.1).

This does not change the dissemination obligations in Article 29 or security obligations in Article 37, which still apply.

30.3 Commission right to object to transfers or licensing

Not applicable

30.4 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43).

Such a breach may also lead to any of the other measures described in Chapter 6.

ARTICLE 31 — ACCESS RIGHTS TO RESULTS

31.1 Exercise of access rights — Waiving of access rights — No sub-licensing

The conditions set out in Article 25.1 apply.

The obligations set out in this Article do not change the security obligations in Article 37, which still apply.

31.2 Access rights for other beneficiaries, for implementing their own tasks under the action

The beneficiaries must give each other access — on a royalty-free basis — to results needed for implementing their own tasks under the action.

31.3 Access rights for other beneficiaries, for exploiting their own results

The beneficiaries must give each other — under fair and reasonable conditions (see Article 25.3) — access to results needed for exploiting their own results.

Requests for access may be made — unless agreed otherwise — up to one year after the period set out in Article 3.

31.4 Access rights of affiliated entities

Unless agreed otherwise in the consortium agreement, access to results must also be given — under fair and reasonable conditions (Article 25.3) — to affiliated entities established in an EU Member State or associated country, if this is needed for those entities to exploit the results generated by the beneficiaries to which they are affiliated.

Unless agreed otherwise (see above; Article 31.1), the affiliated entity concerned must make any such request directly to the beneficiary that owns the results.

Requests for access may be made — unless agreed otherwise — up to one year after the period set out in Article 3.

31.5 Access rights for the EU institutions, bodies, offices or agencies and EU Member States

The beneficiaries must give access to their results — on a royalty-free basis — to EU institutions, bodies, offices or agencies, for developing, implementing or monitoring EU policies or programmes.

Such access rights are limited to non-commercial and non-competitive use.

This does not change the right to use any material, document or information received from the beneficiaries for communication and publicising activities (see Article 38.2).

31.6 Access rights for third parties

The access provider must give the users royalty-free access to the results needed to implement the action.

31.7 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43).

Such breaches may also lead to any of the other measures described in Chapter 6.

SECTION 4 OTHER RIGHTS AND OBLIGATIONS

[21] 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).

ARTICLE 32 — RECRUITMENT AND WORKING CONDITIONS FOR RESEARCHERS

32.1 Obligation to take measures to implement the European Charter for Researchers and Code of Conduct for the Recruitment of 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[21], in particular regarding:

- working conditions;
- transparent recruitment processes based on merit, and
- career development.

The beneficiaries must ensure that researchers and third parties involved in the action are aware of them.

32.2 Consequences of non-compliance

If a beneficiary breaches its obligations under this Article, the Commission may apply any of the measures described in Chapter 6.

ARTICLE 33 — GENDER EQUALITY

33.1 Obligation to aim for gender equality

The beneficiaries must take all measures to promote equal opportunities between men and women in the implementation of the action. 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.

33.2 Consequences of non-compliance

If a beneficiary breaches its obligations under this Article, the Commission may apply any of the measures described in Chapter 6.

ARTICLE 34 — ETHICS AND RESEARCH INTEGRITY

34.1 Obligation to comply with ethical principles and research integrity

The beneficiaries must carry out the action in compliance with:

(a) ethical principles (including the highest standards of research integrity)

and

(b) applicable international, EU and national law.

Funding will not be granted for activities carried out outside the EU if they are prohibited in all Member States or for activities which destroy human embryos (for example, for obtaining stem cells).

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:

(a) aim at human cloning for reproductive purposes;

(b) intend to modify the genetic heritage of human beings which could make such changes heritable (with the exception of research relating to cancer treatment of the gonads, which may be financed), or

(c) 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.

The beneficiaries must respect the highest standards of research integrity — as set out, for instance, in the European Code of Conduct for Research Integrity[22].

This implies notably compliance with the following essential principles:

- honesty;
- reliability;
- objectivity;
- impartiality;
- open communication;
- duty of care;
- fairness and
- responsibility for future science generations.

This means that beneficiaries must ensure that persons carrying out research tasks:

- present their research goals and intentions in an honest and transparent manner;
- design their research carefully and conduct it in a reliable fashion, taking its impact on society into account;
- use techniques and methodologies (including for data collection and management) that are appropriate for the field(s) concerned;
- exercise due care for the subjects of research — be they human beings, animals, the environment or cultural objects;
- ensure objectivity, accuracy and impartiality when disseminating the results;
- allow — as much as possible and taking into account the legitimate interest of the beneficiaries — access to research data, in order to enable research to be reproduced;
- make the necessary references to their work and that of other researchers;

[22] European Code of Conduct for Research Integrity of ALLEA (All European Academies) and ESF (European Science Foundation) of March 2011.
http://www.esf.org/fileadmin/Public_documents/Publications/Code_Conduct_ResearchIntegrity.pdf

- refrain from practicing any form of plagiarism, data falsification or fabrication;
- avoid double funding, conflicts of interest and misrepresentation of credentials or other research misconduct.

34.2 Activities raising ethical issues

Activities raising ethical issues must comply with the '**ethics requirements**' set out as deliverables in Annex 1.

Before the beginning of an activity raising an ethical issue, each beneficiary must have obtained:

(a) any ethics committee opinion required under national law and

(b) any notification or authorisation for activities raising ethical issues required under national and/or European law

needed for implementing the action tasks in question.

The documents must be kept on file and be submitted upon request by the coordinator to the Commission (see Article 52). If they are not in English, they must be submitted together with an English summary, which shows that the action tasks in question are covered and includes the conclusions of the committee or authority concerned (if available).

34.3 Activities involving human embryos or human embryonic stem cells

Activities involving research on human embryos or human embryonic stem cells may be carried out, in addition to Article 34.1, only if:

- they are set out in Annex 1 or
- the coordinator has obtained explicit approval (in writing) from the Commission (see Article 52).

34.4 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43) and the Agreement or participation of the beneficiary may be terminated (see Article 50).

Such breaches may also lead to any of the other measures described in Chapter 6.

ARTICLE 35 — CONFLICT OF INTERESTS

35.1 Obligation to avoid a conflict of interests

The beneficiaries must take all measures to prevent any situation where the impartial and objective implementation of the action is compromised for reasons involving economic interest, political or national affinity, family or emotional ties or any other shared interest ('**conflict of interests**').

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

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

35.2 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43) and the Agreement or participation of the beneficiary may be terminated (see Article 50).

Such breaches may also lead to any of the other measures described in Chapter 6.

ARTICLE 36 — CONFIDENTIALITY

36.1 General obligation to maintain confidentiality

During implementation of the action and for four years after the period set out in Article 3, the parties must keep confidential any data, documents or other material (in any form) that is identified as confidential at the time it is disclosed ('**confidential information**').

If a beneficiary requests, the Commission may agree to keep such information confidential for an additional period beyond the initial four years.

If information has been identified as confidential only orally, it will be considered to be confidential only if this is confirmed in writing within 15 days of the oral disclosure.

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

The beneficiaries may disclose confidential information to their personnel or third parties involved in the action only if they:

(a) need to know to implement the Agreement and

(b) are bound by an obligation of confidentiality.

This does not change the security obligations in Article 37, which still apply.

The Commission may disclose confidential information to its staff, other EU institutions and bodies. It may disclose confidential information to third parties, if:

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

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

Under the conditions set out in Article 4 of the Rules for Participation Regulation No 1290/2013[23], the Commission must moreover make available information on the results to other EU institutions, bodies, offices or agencies as well as Member States or associated countries.

The confidentiality obligations no longer apply if:

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

(b) the information was already known by the recipient or is given to him without obligation of confidentiality by a third party that was not bound by any obligation of confidentiality;

[23] Regulation (EU) No 1290/2013 of the European Parliament and of the Council of 11 December 2013 laying down the rules for participation and dissemination in "Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020)" (OJ L 347, 20.12.2013 p.81).

(c) the recipient proves that the information was developed without the use of confidential information;

(d) the information becomes generally and publicly available, without breaching any confidentiality obligation, or

(e) the disclosure of the information is required by EU or national law.

36.2 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43).

Such breaches may also lead to any of the other measures described in Chapter 6.

ARTICLE 37 — SECURITY-RELATED OBLIGATIONS

37.1 Results with a security recommendation

Not applicable

37.2 Classified information

Not applicable

37.3 Activities involving dual-use goods or dangerous materials and substances

Not applicable

37.4 Consequences of non-compliance

Not applicable

ARTICLE 38 — PROMOTING THE ACTION — VISIBILITY OF EU FUNDING

38.1 Communication activities by beneficiaries

38.1.1 Obligation to promote the action and its results

The beneficiaries must promote the action and its results, by providing targeted information to multiple audiences (including the media and the public) in a strategic and effective manner.

This does not change the dissemination obligations in Article 29, the confidentiality obligations in Article 36 or the security obligations in Article 37, all of which still apply.

Before engaging in a communication activity expected to have a major media impact, the beneficiaries must inform the Commission (see Article 52).

38.1.2 Information on EU funding — Obligation and right to use the EU emblem

Unless the Commission requests or agrees otherwise or unless it is impossible, any communication activity related to the action (including in electronic form, via social media, etc.) and any infrastructure, equipment and major results funded by the grant must:

(a) display the EU emblem and

(b) include the following text:

> For communication activities: *"This project has received funding from the* European Union's Horizon 2020 research and innovation programme *under grant agreement No 730989".*
>
> For infrastructure, equipment and major results: *"This [infrastructure][equipment][insert type of result] is part of a project that has received funding from the* European Union's Horizon 2020 research and innovation programme *under grant agreement No 730989".*

When displayed together with another logo, the EU emblem must have appropriate prominence.

For the purposes of their obligations under this Article, the beneficiaries may use the EU emblem without first obtaining approval from the Commission.

This does not, however, give them the right to exclusive use.

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

38.1.3 Disclaimer excluding Commission responsibility

Any communication activity related to the action must indicate that it reflects only the author's view and that the Commission is not responsible for any use that may be made of the information it contains.

38.2 Communication activities by the Commission

38.2.1 Right to use beneficiaries' materials, documents or information

The Commission may use, for its communication and publicising activities, information relating to the action, documents notably summaries for publication and public deliverables as well as any other material, such as pictures or audio-visual material received from any beneficiary (including in electronic form).

This does not change the confidentiality obligations in Article 36 and the security obligations in Article 37, all of which still apply.

If the Commission's use of these materials, documents or information would risk compromising legitimate interests, the beneficiary concerned may request the Commission not to use it (see Article 52).

The right to use a beneficiary's materials, documents and information includes:

(a) **use for its own purposes** (in particular, making them available to persons working for the Commission or any other EU institution, body, office or agency or body or institutions in EU Member States; and copying or reproducing them in whole or in part, in unlimited numbers);

(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** for communication and publicising activities (including shortening, summarising, inserting other elements (such as 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) giving **access in response to individual requests** under Regulation No 1049/2001[25], without the right to reproduce or exploit;

(f) **storage** in paper, electronic or other form;

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

(h) the right to authorise third parties to act on its behalf or sub-license the modes of use set out in Points (b), (c), (d) and (f) to third parties if needed for the communication and publicising activities of the Commission.

If the right of use is subject to rights of a third party (including personnel of the beneficiary), the beneficiary must ensure that it complies with its obligations under this Agreement (in particular, by obtaining the necessary approval from the third parties concerned).

Where applicable (and if provided by the beneficiaries), the Commission will insert the following information:

"© – [year] – [name of the copyright owner]. All rights reserved. Licensed to the European Union (EU) under conditions."

38.3 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43).

Such breaches may also lead to any of the other measures described in Chapter 6.

ARTICLE 39 — PROCESSING OF PERSONAL DATA

39.1 Processing of personal data by the Commission

Any personal data under the Agreement will be processed by the Commission under Regulation No 45/2001[26] and according to the 'notifications of the processing operations' to the Data Protection Officer (DPO) of the Commission (publicly accessible in the DPO register).

Such data will be processed by the '**data controller**' of the Commission for the purposes of implementing, managing and monitoring the Agreement or protecting the financial interests of the EU or Euratom (including checks, reviews, audits and investigations; see Article 22).

The persons whose personal data are processed have the right to access and correct their own personal data. For this purpose, they must send any queries about the processing of their personal data to the

[25] Regulation (EC) No 1049/2001 of the European Parliament and of the Council of 30 May 2001 regarding public access to European Parliament, Council and Commission documents, OJ L 145, 31.5.2001, p. 43.

[26] Regulation (EC) No 45/2001 of the European Parliament and of the Council of 18 December 2000 on the protection of individuals with regard to the processing of personal data by the Community institutions and bodies and on the free movement of such data (OJ L 8, 12.01.2001, p. 1).

data controller, via the contact point indicated in the privacy statement(s) that are published on the Commission websites.

They also have the right to have recourse at any time to the European Data Protection Supervisor (EDPS).

39.2 Processing of personal data by the beneficiaries

The beneficiaries must process personal data under the Agreement in compliance with applicable EU and national law on data protection (including authorisations or notification requirements).

The beneficiaries may grant their personnel access only to data that is strictly necessary for implementing, managing and monitoring the Agreement.

The beneficiaries must inform the personnel whose personal data are collected and processed by the Commission. For this purpose, they must provide them with the privacy statement(s) (see above), before transmitting their data to the Commission.

39.3 Consequences of non-compliance

If a beneficiary breaches any of its obligations under Article 39.2, the Commission may apply any of the measures described in Chapter 6.

ARTICLE 40 — ASSIGNMENTS OF CLAIMS FOR PAYMENT AGAINST THE COMMISSION

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

If the Commission has not accepted the assignment or 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 Commission.

CHAPTER 5 DIVISION OF BENEFICIARIES' ROLES AND RESPONSIBILITIES — RELATIONSHIP WITH COMPLEMENTARY BENEFICIARIES — RELATIONSHIP WITH PARTNERS OF A JOINT ACTION

ARTICLE 41 — DIVISION OF BENEFICIARIES' ROLES AND RESPONSIBILITIES — RELATIONSHIP WITH COMPLEMENTARY BENEFICIARIES — RELATIONSHIP WITH PARTNERS OF A JOINT ACTION

41.1 Roles and responsibilities towards the Commission

The beneficiaries have full responsibility for implementing the action and complying with the Agreement.

The beneficiaries are jointly and severally liable for the **technical implementation** of the action as described in Annex 1. If a beneficiary fails to implement its part of the action, the other beneficiaries

become responsible for implementing this part (without being entitled to any additional EU funding for doing so), unless the Commission expressly relieves them of this obligation.

The **financial responsibility** of each beneficiary is governed by Articles 44, 45 and 46.

41.2 Internal division of roles and responsibilities

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

(a) Each **beneficiary** must:

(i) keep information stored in the Participant Portal Beneficiary Register (via the electronic exchange system) up to date (see Article 17);

(ii) inform the coordinator immediately of any events or circumstances likely to affect significantly or delay the implementation of the action (see Article 17);

(iii) submit to the coordinator in good time:

- individual financial statements for itself and, if required, certificates on the financial statements (see Article 20);

- the data needed to draw up the technical reports (see Article 20);

- ethics committee opinions and notifications or authorisations for activities raising ethical issues (see Article 34);

- any other documents or information required by the Commission under the Agreement, unless the Agreement requires the beneficiary to submit this information directly to the Commission.

(b) The **coordinator** must:

(i) monitor that the action is implemented properly (see Article 7);

(ii) act as the intermediary for all communications between the beneficiaries and the Commission (in particular, providing the Commission with the information described in Article 17), unless the Agreement specifies otherwise;

(iii) request and review any documents or information required by the Commission and verify their completeness and correctness before passing them on to the Commission;

(iv) submit the deliverables and reports to the Commission (see Articles 19 and 20);

(v) ensure that all payments are made to the other beneficiaries without unjustified delay (see Article 21);

(vi) inform the Commission of the amounts paid to each beneficiary, when required under the Agreement (see Articles 44 and 50) or requested by the Commission.

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

41.3 Internal arrangements between beneficiaries — Consortium agreement

The beneficiaries must have internal arrangements regarding their operation and co-ordination to ensure that the action is implemented properly. These internal arrangements must be set out in a written '**consortium agreement**' between the beneficiaries, which may cover:

- internal organisation of the consortium;
- management of access to the electronic exchange system;
- distribution of EU funding;
- additional rules on rights and obligations related to background and results (including whether access rights remain or not, if a beneficiary is in breach of its obligations) (see Section 3 of Chapter 4);
- settlement of internal disputes;
- liability, indemnification and confidentiality arrangements between the beneficiaries.

The consortium agreement must not contain any provision contrary to the Agreement.

41.4 Relationship with complementary beneficiaries — Collaboration agreement

Not applicable

41.5 Relationship with partners of a joint action — Coordination agreement

Not applicable

CHAPTER 6 REJECTION OF COSTS — REDUCTION OF THE GRANT — RECOVERY — SANCTIONS — DAMAGES — SUSPENSION — TERMINATION — FORCE MAJEURE

SECTION 1 REJECTION OF COSTS — REDUCTION OF THE GRANT — RECOVERY — SANCTIONS

ARTICLE 42 — REJECTION OF INELIGIBLE COSTS

42.1 Conditions

The Commission will — at the time of an **interim payment**, after **termination of the participation of a beneficiary**, at the time of an **interim payment**, **at the payment of the balance** or **afterwards** — reject any costs which are ineligible (see Article 6), in particular following checks, reviews, audits or investigations (see Article 22).

The rejection may also be based on the **extension of findings from other grants to this grant** (see Article 22.5.2).

42.2 Ineligible costs to be rejected — Calculation — Procedure

Ineligible costs will be rejected in full.

If the rejection of costs does not lead to a recovery (see Article 44), the Commission will formally notify the coordinator or beneficiary concerned of the rejection of costs, the amounts and the reasons why (if applicable, together with the notification of amounts due; see Article 21.5). The coordinator or beneficiary concerned may — within 30 days of receiving notification — formally notify the Commission of its disagreement and the reasons why.

If the rejection of costs leads to a recovery, the Commission will follow the contradictory procedure with pre-information letter set out in Article 44.

42.3 Effects

If the Commission rejects costs at the time of an **interim payment** or **the payment of the balance**, it will deduct them from the total eligible costs declared, for the action, in the periodic or final summary financial statement (see Articles 20.3 and 20.4). It will then calculate the interim payment or payment of the balance as set out in Articles 21.3 or 21.4.

If the Commission rejects costs **after termination of the participation of a beneficiary**, it will deduct them from the costs declared by the beneficiary in the termination report and include the rejection in the calculation after termination (see Article 50.2 and 50.3).

If the Commission — **after an interim payment but before the payment of the balance** — rejects costs declared in a periodic summary financial statement, it will deduct them from the total eligible costs declared, for the action, in the next periodic summary financial statement or in the final summary financial statement. It will then calculate the interim payment or payment of the balance as set out in Articles 21.3 or 21.4.

If the Commission rejects costs **after the payment of the balance**, it will deduct the amount rejected from the total eligible costs declared, by the beneficiary, in the final summary financial statement. It will then calculate the revised final grant amount as set out in Article 5.4.

ARTICLE 43 — REDUCTION OF THE GRANT

43.1 Conditions

The Commission may — **after termination of the participation of a beneficiary**, **at the payment of the balance** or **afterwards** — reduce the grant amount (see Article 5.1), if :

(a) a beneficiary (or a natural person who has the power to represent or take decisions on its behalf) has committed:

  (i) substantial errors, irregularities or fraud or

  (ii) serious breach of obligations under the Agreement or during the award procedure (including improper implementation of the action, submission of false information, failure to provide required information, breach of ethical principles) or

(b) a beneficiary (or a natural person who has the power to represent or take decision on its behalf) has committed — in other EU or Euratom 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 from other grants to this grant**; see Article 22.5.2).

43.2 Amount to be reduced — Calculation — Procedure

The amount of the reduction will be proportionate to the seriousness of the errors, irregularities or fraud or breach of obligations.

Before reduction of the grant, the Commission will formally notify a '**pre-information letter**' to the coordinator or beneficiary concerned:

- informing it of its intention to reduce the grant, the amount it intends to reduce and the reasons why and

- inviting it to submit observations within 30 days of receiving notification

If the Commission does not receive any observations or decides to pursue reduction despite the observations it has received, it will formally notify **confirmation** of the reduction (if applicable, together with the notification of amounts due; see Article 21).

43.3 Effects

If the Commission reduces the grant **after termination of the participation of a beneficiary**, it will calculate the reduced grant amount for that beneficiary and then determine the amount due to that beneficiary (see Article 50.2 and 50.3).

If the Commission reduces the grant **at the payment of the balance**, it will calculate the reduced grant amount for the action and then determine the amount due as payment of the balance (see Articles 5.3.4 and 21.4).

If the Commission reduces the grant **after the payment of the balance**, it will calculate the revised final grant amount for the beneficiary concerned (see Article 5.4). If the revised final grant amount for the beneficiary concerned is lower than its share of the final grant amount, the Commission will recover the difference (see Article 44).

ARTICLE 44 — RECOVERY OF UNDUE AMOUNTS

44.1 Amount to be recovered — Calculation — Procedure

The Commission will — after **termination of the participation of a beneficiary, at the payment of the balance** or **afterwards** — claim back any amount that was paid but is not due under the Agreement.

Each beneficiary's financial responsibility in case of recovery is limited to its own debt, except for the amount retained for the Guarantee Fund (see Article 21.4).

44.1.1 Recovery after termination of a beneficiary's participation

If recovery takes place after termination of a beneficiary's participation (including the coordinator), the Commission will claim back the undue amount from the beneficiary concerned, by formally notifying it a debit note (see Article 50.2 and 50.3). This note will specify the amount to be recovered, the terms and the date for payment.

If payment is not made by the date specified in the debit note, the Commission will **recover** the amount:

(a) by '**offsetting**' it — without the beneficiary's consent — against any amounts owed to the beneficiary concerned by the Commission or an executive agency (from the EU or Euratom budget).

In exceptional circumstances, to safeguard the EU's financial interests, the Commission may offset before the payment date specified in the debit note;

(b) not applicable;

(c) by **taking legal action** (see Article 57) or by **adopting an enforceable decision** under Article 299 of the Treaty on the Functioning of the EU (TFEU) and Article 79(2) of the Financial regulation No 966/2012.

If payment is not made by the date specified in the debit note, the amount to be recovered (see above) will be increased by **late-payment interest** at the rate set out in Article 21.11, from the day following the payment date in the debit note, up to and including the date the Commission receives full payment of the amount.

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 2007/64/EC[27] applies.

44.1.2 Recovery at payment of the balance

If the payment of the balance takes the form of a recovery (see Article 21.4), the Commission will formally notify a '**pre-information letter**' to the coordinator:

- informing it of its intention to recover, the amount due as the balance and the reasons why;
- specifying that it intends to deduct the amount to be recovered from the amount retained for the Guarantee Fund;
- requesting the coordinator to submit a report on the distribution of payments to the beneficiaries within 30 days of receiving notification, and
- inviting the coordinator to submit observations within 30 days of receiving notification.

If no observations are submitted or the Commission decides to pursue recovery despite the observations it has received, it will **confirm recovery** (together with the notification of amounts due; see Article 21.5) and:

- pay the difference between the amount to be recovered and the amount retained for the Guarantee Fund, **if the difference is positive** or
- formally notify to the coordinator a **debit note** for the difference between the amount to be recovered and the amount retained for the Guarantee Fund, **if the difference is negative**. This note will also specify the terms and the date for payment.

[27] Directive 2007/64/EC of the European Parliament and of the Council of 13 November 2007 on payment services in the internal market amending Directives 97/7/EC, 2002/65/EC, 2005/60/EC and 2006/48/EC and repealing Directive 97/5/EC (OJ L 319, 05.12.2007, p. 1).

If the coordinator does not repay the Commission by the date in the debit note and has not submitted the report on the distribution of payments: the Commission will **recover** the amount set out in the debit note from the coordinator (see below).

If the coordinator does not repay the Commission by the date in the debit note, but has submitted the report on the distribution of payments: the Commission will:

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

{{{{beneficiary's costs declared in the final summary financial statement and approved by the Commission multiplied by the reimbursement rate set out in Article 5.2 for the beneficiary concerned}

divided by

the EU contribution for the action calculated according to Article 5.3.1}

multiplied by

the final grant amount (see Article 5.3)},

minus

{pre-financing and interim payments received by the beneficiary}}.

(b) formally notify to each beneficiary identified according to point (a) a **debit note** specifying the terms and date for payment. The amount of the debit note is calculated as follows:

{{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 set out in the debit note formally notified to the coordinator}.

If payment is not made by the date specified in the debit note, the Commission will **recover** the amount:

(a) by '**offsetting**' it — without the beneficiary's consent — against any amounts owed to the beneficiary concerned by the Commission or an executive agency (from the EU or Euratom budget).

In exceptional circumstances, to safeguard the EU's financial interests, the Commission may offset before the payment date specified in the debit note;

(b) by **drawing on the Guarantee Fund**. The Commission will formally notify the beneficiary concerned the debit note on behalf of the Guarantee Fund and recover the amount:

(i) not applicable;

(ii) by **taking legal action** (see Article 57) or by **adopting an enforceable decision** under Article 299 of the Treaty on the Functioning of the EU (TFEU) and Article 79(2) of the Financial Regulation No 966/2012.

If payment is not made by the date in the debit note, the amount to be recovered (see above) will be increased by **late-payment interest** at the rate set out in Article 21.11, from the day following the payment date in the debit note, up to and including the date the Commission receives full payment of the amount.

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 2007/64/EC applies.

44.1.3 Recovery of amounts after payment of the balance

If, for a beneficiary, the revised final grant amount (see Article 5.4) is lower than its share of the final grant amount, it must repay the difference to the Commission.

The beneficiary's share of the final grant amount is calculated as follows:

{{{beneficiary's costs declared in the final summary financial statement and approved by the Commission multiplied by the reimbursement rate set out in Article 5.2 for the beneficiary concerned}

divided by

the EU contribution for the action calculated according to Article 5.3.1}

multiplied by

the final grant amount (see Article 5.3)}.

If the coordinator has not distributed amounts received (see Article 21.7), the Commission will also recover these amounts.

The Commission will formally notify a **pre-information letter** to the beneficiary concerned:

- informing it of its intention to recover, the due amount and the reasons why and
- inviting it to submit observations within 30 days of receiving notification.

If no observations are submitted or the Commission decides to pursue recovery despite the observations it has received, it will **confirm** the amount to be recovered and formally notify to the beneficiary concerned a **debit note**. This note will also specify the terms and the date for payment.

If payment is not made by the date specified in the debit note, the Commission will **recover** the amount:

(a) by '**offsetting**' it — without the beneficiary's consent — against any amounts owed to the beneficiary concerned by the Commission or an executive agency (from the EU or Euratom budget).

In exceptional circumstances, to safeguard the EU's financial interests, the Commission may offset before the payment date specified in the debit note;

(b) by **drawing on the Guarantee Fund**. The Commission will formally notify the beneficiary concerned the debit note on behalf of the Guarantee Fund and recover the amount:

(i) not applicable;

(ii) by **taking legal action** (see Article 57) or by **adopting an enforceable decision** under Article 299 of the Treaty on the Functioning of the EU (TFEU) and Article 79(2) of the Financial Regulation No 966/2012.

If payment is not made by the date in the debit note, the amount to be recovered (see above) will be increased by **late-payment interest** at the rate set out in Article 21.11, from the day following the date for payment in the debit note, up to and including the date the Commission receives full payment of the amount.

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 2007/64/EC applies.

ARTICLE 45 — ADMINISTRATIVE SANCTIONS

In addition to contractual measures, the Commission may also adopt administrative sanctions under Articles 106 and 131(4) of the Financial Regulation No 966/2012 (i.e. exclusion from future procurement contracts, grants and expert contracts and/or financial penalties).

SECTION 2 LIABILITY FOR DAMAGES

ARTICLE 46 — LIABILITY FOR DAMAGES

46.1 Liability of the Commission

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

The Commission cannot be held liable for any damage caused by any of the beneficiaries or third parties involved in the action, as a consequence of implementing the Agreement.

46.2 Liability of the beneficiaries

Except in case of force majeure (see Article 51), the beneficiaries must compensate the Commission 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.

SECTION 3 SUSPENSION AND TERMINATION

ARTICLE 47 — SUSPENSION OF PAYMENT DEADLINE

47.1 Conditions

The Commission may — at any moment — suspend the payment deadline (see Article 21.2 to 21.4) if a request for payment (see Article 20) cannot be approved because:

(a) it does not comply with the provisions of the Agreement (see Article 20);

(b) the technical or financial reports have not been submitted or are not complete or additional information is needed, or

(c) there is doubt about the eligibility of the costs declared in the financial statements and additional checks, reviews, audits or investigations are necessary.

47.2 Procedure

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

The suspension will **take effect** the day notification is sent by the Commission (see Article 52).

If the conditions for suspending the payment deadline are no longer met, the suspension will be **lifted** — and the remaining period will resume.

If the suspension exceeds two months, the coordinator may request the Commission if the suspension will continue.

If the payment deadline has been suspended due to the non-compliance of the technical or financial reports (see Article 20) and the revised report or statement is not submitted or was submitted but is also rejected, the Commission may also terminate the Agreement or the participation of the beneficiary (see Article 50.3.1(l)).

ARTICLE 48 — SUSPENSION OF PAYMENTS

48.1 Conditions

The Commission may — at any moment — suspend payments, in whole or in part and interim payments or the payment of the balance for one or more beneficiaries, if:

(a) a beneficiary (or a natural person who has the power to represent or take decision on its behalf) has committed or is suspected of having committed:

  (i) substantial errors, irregularities or fraud or

  (ii) serious breach of obligations under the Agreement or during the award procedure (including improper implementation of the action, submission of false information, failure to provide required information, breach of ethical principles) or

(b) a beneficiary (or a natural person who has the power to represent or take decision on its behalf) has committed — in other EU or Euratom 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 from other grants to this grant**; see Article 22.5.2).

If payments are suspended for one or more beneficiaries, the Commission will make partial payment(s) for the part(s) not suspended. If suspension concerns the payment of the balance, — once suspension is lifted — the payment or the recovery of the amount(s) concerned will be considered the payment of the balance that closes the action.

48.2 Procedure

Before suspending payments, the Commission will formally notify the coordinator or beneficiary concerned:

- informing it of its intention to suspend payments and the reasons why and
- inviting it to submit observations within 30 days of receiving notification.

If the Commission does not receive observations or decides to pursue the procedure despite the observations it has received, it will formally notify **confirmation** of the suspension. Otherwise, it will formally notify that the suspension procedure is not continued.

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

If the conditions for resuming payments are met, the suspension will be **lifted**. The Commission will formally notify the coordinator or beneficiary concerned.

During the suspension, the periodic report(s) for all reporting periods except the last one (see Article 20.3), must not contain any individual financial statements from the beneficiary concerned. 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.

The beneficiaries may suspend implementation of the action (see Article 49.1) or terminate the Agreement or the participation of the beneficiary concerned (see Article 50.1 and 50.2).

ARTICLE 49 — SUSPENSION OF THE ACTION IMPLEMENTATION

49.1 Suspension of the action implementation, by the beneficiaries

49.1.1 Conditions

The beneficiaries may suspend implementation of the action or any part of it, if exceptional circumstances — in particular *force majeure* (see Article 51) — make implementation impossible or excessively difficult.

49.1.2 Procedure

The coordinator must immediately formally notify to the Commission the suspension (see Article 52), stating:

- the reasons why and
- the expected date of resumption.

The suspension will **take effect** the day this notification is received by the Commission.

Once circumstances allow for implementation to resume, the coordinator must immediately formally notify the Commission and request an **amendment** of the Agreement to set the date on which the

action will be resumed, extend the duration of the action and make other changes necessary to adapt the action to the new situation (see Article 55) — unless the Agreement or the participation of a beneficiary has been terminated (see Article 50).

The suspension will be **lifted** with effect from the resumption date set out in the amendment. This date may be before the date on which the amendment enters into force.

Costs incurred during suspension of the action implementation are not eligible (see Article 6).

49.2 Suspension of the action implementation, by the Commission

49.2.1 Conditions

The Commission may suspend implementation of the action or any part of it, if:

(a) a beneficiary (or a natural person who has the power to represent or take decisions on its behalf) has committed or is suspected of having committed:

(i) substantial errors, irregularities or fraud or

(ii) serious breach of obligations under the Agreement or during the award procedure (including improper implementation of the action, submission of false declaration, failure to provide required information, breach of ethical principles);

(b) a beneficiary (or a natural person who has the power to represent or take decisions on its behalf) has committed — in other EU or Euratom 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 from other grants to this grant**; see Article 22.5.2), or

(c) the action is suspected of having lost its scientific or technological relevance.

49.2.2 Procedure

Before suspending implementation of the action, the Commission will formally notify the coordinator or beneficiary concerned:

- informing it of its intention to suspend the implementation and the reasons why and

- inviting it to submit observations within 30 days of receiving notification.

If the Commission does not receive observations or decides to pursue the procedure despite the observations it has received, it will formally notify **confirmation** of the suspension. Otherwise, it will formally notify that the procedure is not continued.

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

It will be **lifted** if the conditions for resuming implementation of the action are met.

The coordinator or beneficiary concerned will be formally notified of the lifting and the Agreement will be **amended** to set the date on which the action will be resumed, extend the duration of the action

and make other changes necessary to adapt the action to the new situation (see Article 55) — unless the Agreement has already been terminated (see Article 50).

The suspension will be lifted with effect from the resumption date set out in the amendment. This date may be before the date on which the amendment enters into force.

Costs incurred during suspension are not eligible (see Article 6).

The beneficiaries may not claim damages due to suspension by the Commission (see Article 46).

Suspension of the action implementation does not affect the Commission's right to terminate the Agreement or participation of a beneficiary (see Article 50), reduce the grant or recover amounts unduly paid (see Articles 43 and 44).

ARTICLE 50 — TERMINATION OF THE AGREEMENT OR OF THE PARTICIPATION OF ONE OR MORE BENEFICIARIES

50.1 Termination of the Agreement, by the beneficiaries

50.1.1 Conditions and procedure

The beneficiaries may terminate the Agreement.

The coordinator must formally notify termination to the Commission (see Article 52), stating:

- the reasons why and
- the date the termination will take effect. This date must be after the notification.

If no reasons are given or if the Commission considers the reasons do not justify termination, the Agreement will be considered to have been '**terminated improperly**'.

The termination will **take effect** on the day specified in the notification.

50.1.2 Effects

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

(i) a periodic report (for the open reporting period until termination; see Article 20.3) and

(ii) the final report (see Article 20.4).

If the Commission does not receive the reports within the deadline (see above), only costs which are included in an approved periodic report will be taken into account.

The Commission will **calculate** the final grant amount (see Article 5.3) and the balance (see Article 21.4) on the basis of the reports submitted. Only costs incurred until termination are eligible (see Article 6). Costs relating to contracts due for execution only after termination are not eligible.

Improper termination may lead to a reduction of the grant (see Article 43).

After termination, the beneficiaries' obligations (in particular Articles 20, 22, 23, Section 3 of Chapter 4, 36, 37, 38, 40, 42, 43 and 44) continue to apply.

50.2 Termination of the participation of one or more beneficiaries, by the beneficiaries

50.2.1 Conditions and procedure

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

The coordinator must formally notify termination to the Commission (see Article 52) and inform the beneficiary concerned.

If the coordinator's participation is terminated without its agreement, the formal notification must be done by another beneficiary (acting on behalf of the other beneficiaries).

The notification must include:

- the reasons why;
- the opinion of the beneficiary concerned (or proof that this opinion has been requested in writing);
- the date the termination takes effect. This date must be after the notification, and
- a request for amendment (see Article 55), with a proposal for reallocation of the tasks and the estimated budget of the beneficiary concerned (see Annexes 1 and 2) and, if necessary, the addition of one or more new beneficiaries (see Article 56). If termination takes effect after the period set out in Article 3, no request for amendment must be included unless the beneficiary concerned is the coordinator. In this case, the request for amendment must propose a new coordinator.

If this information is not given or if the Commission considers that the reasons do not justify termination, the participation will be considered to have been **terminated improperly**.

The termination will **take effect** on the day specified in the notification.

50.2.2 Effects

The coordinator must — within 30 days from when termination takes effect — submit:

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

(ii) if termination takes effect during the period set out in Article 3, a '**termination report**' from the beneficiary concerned, for the open reporting period until termination, containing an overview of the progress of the work, an overview of the use of resources, the individual financial statement and, if applicable, the certificate on the financial statement (see Articles 20.3 and 20.4).

The information in the termination report must also be included in the periodic report for the next reporting period (see Article 20.3).

If the request for amendment is rejected by the Commission, (because it calls into question the decision awarding the grant or breaches the principle of equal treatment of applicants), the Agreement may be terminated according to Article 50.3.1(c).

If the request for amendment is accepted by the Commission, the Agreement is **amended** to introduce the necessary changes (see Article 55).

The Commission will — on the basis of the periodic reports, the termination report and the report on the distribution of payments — **calculate** the amount which is due to the beneficiary and if the (pre-financing and interim) payments received by the beneficiary exceed this amount.

The **amount which is due** is calculated in the following steps:

Step 1 — Application of the reimbursement rate to the eligible costs

The grant amount for the beneficiary is calculated by applying the reimbursement rate(s) to the total eligible costs declared by the beneficiary in the termination report and approved by the Commission.

Only costs incurred by the beneficiary concerned until termination takes effect are eligible (see Article 6). Costs relating to contracts due for execution only after termination are not eligible.

Step 2 — Reduction due to substantial errors, irregularities or fraud or serious breach of obligations

In case of a reduction (see Article 43), the Commission will calculate the reduced grant amount for the beneficiary by deducting the amount of the reduction (calculated in proportion to the seriousness of the errors, irregularities or fraud or breach of obligations, in accordance with Article 43.2) from the grant amount for the beneficiary.

If the payments received **exceed the amounts due**:

- if termination takes effect during the period set out in Article 3 and the request for amendment is accepted, the beneficiary concerned must repay to the coordinator the amount unduly received. The Commission will formally notify the amount unduly received and request the beneficiary concerned to repay it to the coordinator within 30 days of receiving notification. If it does not repay the coordinator, the Commission will draw upon the Guarantee Fund to pay the coordinator and then notify a **debit note** on behalf of the Guarantee Fund to the beneficiary concerned (see Article 44);

- in all other cases, in particular if termination takes effect after the period set out in Article 3, the Commission will formally notify a **debit note** to the beneficiary concerned. If payment is not made by the date in the debit note, the Guarantee Fund will pay to the Commission the amount due and the Commission will notify a debit note on behalf of the Guarantee Fund to the beneficiary concerned (see Article 44);

- if the beneficiary concerned is the former coordinator, it must repay the new coordinator according to the procedure above, unless:

    - termination takes effect after an interim payment and

    - the former coordinator has not distributed amounts received as pre-financing or interim payments (see Article 21.7).

In this case, the Commission will formally notify a **debit note** to the former coordinator. If payment is not made by the date in the debit note, the Guarantee Fund will pay to the Commission the amount due. The Commission will then pay the new coordinator and notify a debit note on behalf of the Guarantee Fund to the former coordinator (see Article 44).

If the payments received **do not exceed the amounts due**: amounts owed to the beneficiary concerned will be included in the next interim or final payment.

If the Commission does not receive the termination report within the deadline (see above), only costs included in an approved periodic report will be taken into account.

If the Commission does not receive the report on the distribution of payments within the deadline (see above), 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.

Improper termination may lead to a reduction of the grant (see Article 43) or termination of the Agreement (see Article 50).

After termination, the concerned beneficiary's obligations (in particular Articles 20, 22, 23, Section 3 of Chapter 4, 36, 37, 38, 40, 42, 43 and 44) continue to apply.

50.3 Termination of the Agreement or the participation of one or more beneficiaries, by the Commission

50.3.1 Conditions

The Commission may terminate the Agreement or the participation of one or more beneficiaries, if:

(a) one or more beneficiaries do not accede to the Agreement (see Article 56);

(b) a change to their legal, financial, technical, organisational or ownership situation is likely to substantially affect or delay the implementation of the action or calls into question the decision to award the grant;

(c) following termination of participation for one or more beneficiaries (see above), the necessary changes to the Agreement would call into question the decision awarding the grant or breach the principle of equal treatment of applicants (see Article 55);

(d) implementation of the action is prevented by force majeure (see Article 51) or suspended by the coordinator (see Article 49.1) and either:

(i) resumption is impossible, or

(ii) the necessary changes to the Agreement would call into question the decision awarding the grant or breach the principle of equal treatment of applicants;

(e) a beneficiary is declared bankrupt, being wound up, having its affairs administered by the courts, has entered into an arrangement with creditors, has suspended business activities, or is subject to any other similar proceedings or procedures under national law;

(f) a beneficiary (or a natural person who has the power to represent or take decisions on its behalf) has been found guilty of professional misconduct, proven by any means;

(g) a beneficiary does not comply with the applicable national law on taxes and social security;

(h) the action has lost scientific or technological relevance;

(i) not applicable;

(j) not applicable;

(k) a beneficiary (or a natural person who has the power to represent or take decisions on its behalf) has committed fraud, corruption, or is involved in a criminal organisation, money laundering or any other illegal activity;

(l) a beneficiary (or a natural person who has the power to represent or take decisions on its behalf) has committed:

(i) substantial errors, irregularities or fraud or

(ii) serious breach of obligations under the Agreement or during the award procedure (including improper implementation of the action, submission of false information, failure to provide required information, breach of ethical principles);

(m) a beneficiary has committed — in other EU or Euratom 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 from other grants to this grant**; see Article 22.5.2).

(n) despite a specific request by the Commission, a beneficiary does not request — through the coordinator — an amendment to the Agreement to end the participation of one of its linked third parties that is in one of the situations under points (e), (f), (g), (k), (l) or (m) and to reallocate its tasks.

50.3.2 Procedure

Before terminating the Agreement or participation of one or more beneficiaries, the Commission will formally notify the coordinator or beneficiary concerned:

- informing it of its intention to terminate and the reasons why and

- inviting it, within 30 days of receiving notification, to submit observations and — in case of Point (l.ii) above — to inform the Commission of the measures to ensure compliance with the obligations under the Agreement.

If the Commission does not receive observations or decides to pursue the procedure despite the observations it has received, it will formally notify to the coordinator or beneficiary concerned **confirmation** of the termination and the date it will take effect. Otherwise, it will formally notify that the procedure is not continued.

The termination will **take effect**:

- for terminations under Points (b), (c), (e), (g), (h), (j), (l.ii) and (n) above: on the day specified in the notification of the confirmation (see above);

- for terminations under Points (a), (d), (f), (i), (k), (l.i) and (m) above: on the day after the notification of the confirmation is received.

50.3.3 Effects

(a) for **termination of the Agreement**:

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

(i) a periodic report (for the last open reporting period until termination; see Article 20.3) and

(ii) a final report (see Article 20.4).

If the Agreement is terminated for breach of the obligation to submit reports (see Articles 20.8 and 50.3.1(l)), the coordinator may not submit any reports after termination.

If the Commission does not receive the reports within the deadline (see above), only costs which are included in an approved periodic report will be taken into account.

The Commission will **calculate** the final grant amount (see Article 5.3) and the balance (see Article 21.4) on the basis of the reports submitted. Only costs incurred until termination takes effect are eligible (see Article 6). Costs relating to contracts due for execution only after termination are not eligible.

This does not affect the Commission's right to reduce the grant (see Article 43) or to impose administrative sanctions (Article 45).

The beneficiaries may not claim damages due to termination by the Commission (see Article 46).

After termination, the beneficiaries' obligations (in particular Articles 20, 22, 23, Section 3 of Chapter 4, 36, 37, 38, 40, 42, 43 and 44) continue to apply.

(b) for **termination of the participation of one or more beneficiaries**:

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 request for amendment (see Article 55), with a proposal for reallocation of the tasks and estimated budget of the beneficiary concerned (see Annexes 1 and 2) and, if necessary, the addition of one or more new beneficiaries (see Article 56). If termination is notified after the period set out in Article 3, no request for amendment must be submitted unless the beneficiary concerned is the coordinator. In this case the request for amendment must propose a new coordinator, and

(iii) if termination takes effect during the period set out in Article 3, a **termination report** from the beneficiary concerned, for the open reporting period until termination, containing an overview of the progress of the work, an overview of the use of resources, the individual financial statement and, if applicable, the certificate on the financial statement (see Article 20).

The information in the termination report must also be included in the periodic report for the next reporting period (see Article 20.3).

If the request for amendment is rejected by the Commission, (because it calls into question the decision awarding the grant or breaches the principle of equal treatment of applicants), the Agreement may be terminated according to Article 50.3.1(c).

If the request for amendment is accepted by the Commission, the Agreement is **amended** to introduce the necessary changes (see Article 55).

The Commission will — on the basis of the periodic reports, the termination report and the report on the distribution of payments — **calculate** the amount which is due to the beneficiary and if the (pre-financing and interim) payments received by the beneficiary exceed this amount.

The **amount which is due** is calculated in the following steps:

Step 1 — Application of the reimbursement rate to the eligible costs

The grant amount for the beneficiary is calculated by applying the reimbursement rate(s) to the total eligible costs declared by the beneficiary in the termination report and approved by the Commission.

Only costs incurred by the beneficiary concerned until termination takes effect are eligible (see Article 6). Costs relating to contracts due for execution only after termination are not eligible.

Step 2 — Reduction due to substantial errors, irregularities or fraud or serious breach of obligations

In case of a reduction (see Article 43), the Commission will calculate the reduced grant amount for the beneficiary by deducting the amount of the reduction (calculated in proportion to the seriousness of the errors, irregularities or fraud or breach of obligations, in accordance with Article 43.2) from the grant amount for the beneficiary.

If the payments received **exceed the amounts due**:

- if termination takes effect during the period set out in Article 3 and the request for amendment is accepted, the beneficiary concerned must repay to the coordinator the amount unduly received. The Commission will formally notify the amount unduly received and request the beneficiary concerned to repay it to the coordinator within 30 days of receiving notification. If it does not repay the coordinator, the Commission will draw upon the Guarantee Fund to pay the coordinator and then notify a **debit note** on behalf of the Guarantee Fund to the beneficiary concerned (see Article 44);

- in all other cases, in particular if termination takes effect after the period set out in Article 3, the Commission will formally notify a **debit note** to the beneficiary concerned. If payment is not made by the date in the debit note, the Guarantee Fund will pay to the Commission the amount due and the Commission will notify a debit note on behalf of the Guarantee Fund to the beneficiary concerned (see Article 44);

- if the beneficiary concerned is the former coordinator, it must repay the new coordinator according to the procedure above, unless:

    - termination takes effect after an interim payment and

- the former coordinator has not distributed amounts received as pre-financing or interim payments (see Article 21.7).

In this case, the Commission will formally notify a **debit note** to the former coordinator. If payment is not made by the date in the debit note, the Guarantee Fund will pay to the Commission the amount due. The Commission will then pay the new coordinator and notify a debit note on behalf of the Guarantee Fund to the former coordinator (see Article 44).

If the payments received **do not exceed the amounts due**: amounts owed to the beneficiary concerned will be included in the next interim or final payment.

If the Commission does not receive the termination report within the deadline (see above), only costs included in an approved periodic report will be taken into account.

If the Commission does not receive the report on the distribution of payments within the deadline (see above), 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.

After termination, the concerned beneficiary's obligations (in particular Articles 20, 22, 23, Section 3 of Chapter 4, 36, 37, 38, 40, 42, 43 and 44) continue to apply.

SECTION 4 FORCE MAJEURE

ARTICLE 51 — FORCE MAJEURE

'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 third parties involved in the action), and

- proves to be inevitable in spite of exercising all due diligence.

The following cannot be invoked as force majeure:

- any default of a service, defect in equipment or material or delays in making them available, unless they stem directly from a relevant case of force majeure,

- labour disputes or strikes, or

- financial difficulties.

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

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.

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

CHAPTER 7 FINAL PROVISIONS

ARTICLE 52 — COMMUNICATION BETWEEN THE PARTIES

52.1 Form and means of communication

Communication under the Agreement (information, requests, submissions, 'formal notifications', etc.) must:

- be made in writing and
- bear the number of the Agreement.

Until the payment of the balance: all communication must be made through the electronic exchange system and using the forms and templates provided there.

After the payment of the balance: formal notifications must be made by registered post with proof of delivery ('formal notification on paper').

Communications in the electronic exchange system must be made by persons authorised according to the Participant Portal Terms & 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 his/her appointment letter (see Participant Portal Terms & Conditions).

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

52.2 Date of communication

Communications are considered to have been made when they are sent by the sending party (i.e. on the date and time they are sent through the electronic exchange system).

Formal notifications through the **electronic** exchange system are considered to have been made when they are received by the receiving party (i.e. on the date and time of acceptance by the receiving party, as indicated by the time stamp). A formal notification that has not been accepted within 10 days after sending is considered to have been accepted.

Formal notifications **on paper** sent by **registered post** with proof of delivery (only after the payment of the balance) are considered to have been made on either:

- 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.

52.3 Addresses for communication

The **electronic** exchange system must be accessed via the following URL:

https://ec.europa.eu/research/participants/portal/desktop/en/projects/

The Commission will formally notify the coordinator and beneficiaries in advance any changes to this URL.

Formal notifications on paper (only after the payment of the balance) addressed **to the Commission** must be sent to the following address:

European Commission
DIRECTORATE-GENERAL FOR RESEARCH & INNOVATION
Research infrastructure
B-1049 Brussels Belgium

Formal notifications on paper (only after the payment of the balance) addressed **to the beneficiaries** must be sent to their legal address as specified in the Participant Portal Beneficiary Register.

ARTICLE 53 — INTERPRETATION OF THE AGREEMENT

53.1 Precedence of the Terms and Conditions over the Annexes

The provisions in the Terms and Conditions of the Agreement take precedence over its Annexes.

Annex 2 takes precedence over Annex 1.

53.2 Privileges and immunities

Not applicable

ARTICLE 54 — CALCULATION OF PERIODS, DATES AND DEADLINES

In accordance with Regulation No 1182/71[28], 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.

ARTICLE 55 — AMENDMENTS TO THE AGREEMENT

55.1 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.

[28] 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).

Amendments may be requested by any of the parties.

55.2 Procedure

The party requesting an amendment must submit a request for amendment signed in the electronic exchange system (see Article 52).

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;
- for a change of coordinator without its agreement: the opinion of the coordinator (or proof that this opinion has been requested in writing).

The Commission may request additional information.

If the party receiving the request agrees, it must sign the amendment in the electronic exchange system within 45 days of receiving notification (or any additional information the Commission 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 agreed by the parties or, in the absence of such an agreement, on the date on which the amendment enters into force.

ARTICLE 56 — ACCESSION TO THE AGREEMENT

56.1 Accession of the beneficiaries mentioned in the Preamble

The other beneficiaries must accede to the Agreement by signing the Accession Form (see Annex 3) in the electronic exchange system (see Article 52) within 30 days after its entry into force (see Article 58).

They will assume the rights and obligations under the Agreement with effect from the date of its entry into force (see Article 58).

If a beneficiary does not accede to the Agreement within the above deadline, the coordinator must — within 30 days — request an amendment to make any changes necessary to ensure proper implementation of the action. This does not affect the Commission’s right to terminate the Agreement (see Article 50).

56.2 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 55. It must include an Accession Form (see Annex 3) signed by the new beneficiary in the electronic exchange system (see Article 52).

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

ARTICLE 57 — APPLICABLE LAW AND SETTLEMENT OF DISPUTES

57.1 Applicable law

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

57.2 Dispute settlement

If a dispute concerning the interpretation, application or validity of the Agreement cannot be settled amicably, the General Court — or, on appeal, the Court of Justice of the European Union — has sole jurisdiction. Such actions must be brought under Article 272 of the Treaty on the Functioning of the EU (TFEU).

If a dispute concerns administrative sanctions, offsetting or an enforceable decision under Article 299 TFEU (see Articles 44, 45 and 46), the beneficiaries must bring action before the General Court — or, on appeal, the Court of Justice of the European Union — under Article 263 TFEU.

ARTICLE 58 — ENTRY INTO FORCE OF THE AGREEMENT

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

SIGNATURES

For the coordinator

Marek LEWITOWICZ with ECAS id nlewitma signed in the Participant Portal on 23/11/2016 at 18:56:21 (transaction id SigId-17017-Pq8hLXBaOPGDodqvUBA4eNEAj2zmzkWKp3KyjlxWAi7E0JQEGaEzi6StueRzJFkiNAmsCDSlH6ywOzxZQM5GsUM-Jj71zxYb8yrgsOBSBvcQLO-800Z3kowxZzQzhQ5oI3JhzttpOyeCyVBEozYAxWapsCX). Timestamp by third party at
Wed Nov 23 18:56:30 CET 2016

For the Commission

Signed by Pascale CID with ECAS id cidlupa as an authorised representative on 13-12-2016 11:54:06 (transaction id SigId-71087-XiDivbCzT6qU4Pfa4bnqEykLWVuPzflYhPnKlux3zMzjfbVg0grVjoPzXhm625tJj6aUV7UCubu5sfOYS0eeTaU-Jj71zxYb8yryEnwGPo6Oly-zSOZ0CXSB4n8EzyEFxVJYm2OfNVlo6zemJ0loT03dRT4)
Tue Dec 13 11:54:55 CET 2016

EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR RESEARCH & INNOVATION
Research infrastructure

ANNEX 1 (part A)

Coordination and support action

NUMBER — 730989 — IDEAAL

Table of Contents

1.1. The project summary

Project Number [1]	730989	Project Acronym [2]	IDEAAL

One form per project

General information	
Project title [3]	International Development of gAnil-spirAL2
Starting date [4]	01/01/2017
Duration in months [5]	36
Call (part) identifier [6]	H2020-INFRADEV-2016-1
Topic	INFRADEV-03-2016-2017 Individual support to ESFRI and other world-class research infrastructures
Fixed EC Keywords	Knowledge infrastructure
Free keywords	Nuclear physics, interdisciplinary research, international infrastructure

Abstract [7]

The objectives of the IDEAAL Project are to explore all possibilities to develop GANIL infrastructure, with its new ESFRI SPIRAL2 facility, in order to ensure its long-term sustainability as one of the premiere European research institutes for nuclear physics, interdisciplinary sciences and related applications.
The first objective of the IDEAAL Project is to enlarge the present GANIL membership to include academic institutions and private funding partners. This enlargement goes hand-in-hand with a reinforcement of the involvement of the current institutional funders and academic users of GANIL-SPIRAL2 in the decision-making process and management of the facility.
The second objective of IDEAAL is to enhance the excellence of access to the infrastructure by optimizing support to the users, access policy, assessment on the cost of access to the facilities and to data, improvement of the performance capabilities as well as exchange and training of personnel with associated partners.
Innovation is the third objective of IDEAAL. With the new facility SPIRAL2, it is essential to encourage industrial users of the uniqueness of this new machine for their research and applications and to allow them to develop new experimental tools at the existing GANIL facilities. Access provision dedicated to industrial users will greatly enhance their experience and increase their interest and trust in GANIL-SPIRAL2. In parallel, new ideas and topics for technology transfer will be clearly identified. The increase of innovation potential of GANIL will also be evaluated.
These three objectives must be supported by a strong communication and outreach policy towards members and funding partners, users and the layman. This is the fourth objective of the project.
Fulfilling all of these four objectives will allow a well-organized, highly efficient and sustainable development of the current GANIL structure.

1.2. List of Beneficiaries

Project Number [1]	730989	Project Acronym [2]	IDEAAL

List of Beneficiaries

No	Name	Short name	Country	Project entry month[8]	Project exit month
1	GRAND ACCELERATEUR NATIONAL D'IONS LOURDS	GANIL	France	1	36
2	CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE CNRS	CNRS	France	1	36
3	COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES	CEA	France	1	36
4	GSI HELMHOLTZZENTRUM FUER SCHWERIONENFORSCHUNG Gmbh	GSI	Germany	1	36
5	THE HENRYK NIEWODNICZANSKI INSTITUTE OF NUCLEAR PHYSICS, POLISH ACADEMY OF SCIENCES	IFJ PAN	Poland	1	36
6	NUCLEOPOLIS POLE NORMAND DES SCIENCES NUCLEAIRES ET DE LEURS APPLICATIONS	Nucleopolis	France	1	36

1.3. Workplan Tables - Detailed implementation

1.3.1. WT1 List of work packages

WP Number[9]	WP Title	Lead beneficiary[10]	Person-months[11]	Start month[12]	End month[13]
WP1	Management	1 - GANIL	0.10	1	36
WP2	International Coordination and New Partners	2 - CNRS	120.70	1	36
WP3	Excellence of Access to Infrastructure	1 - GANIL	102.00	1	36
WP4	Innovation and Industries	1 - GANIL	66.00	1	36
WP5	Communication and Outreach	1 - GANIL	60.00	1	36
		Total	348.80		

1.3.2. WT2 list of deliverables

Deliverable Number[14]	Deliverable Title	WP number[9]	Lead beneficiary	Type[15]	Dissemination level[16]	Due Date (in months)[17]
D1.1	Plan for dissemination and exploitation of results	WP1	1 - GANIL	Report	Public	6
D2.1	Draft collaboration agreements negotiated with academic partners	WP2	2 - CNRS	Report	Public	36
D2.2	Report on strategic and legal studies for private funding	WP2	2 - CNRS	Report	Public	36
D2.3	Procedure of evaluation of in-kind contributions and their monitoring	WP2	2 - CNRS	Report	Public	24
D2.4	Report on new organisation involving users	WP2	2 - CNRS	Report	Public	30
D3.1	Access policy rules for academic and industrial users of GANIL	WP3	1 - GANIL	Report	Public	36
D3.2	Creation of a new User Office	WP3	1 - GANIL	Other	Public	24
D3.3	Tool for operation costs modeling according to beam time and experiments scenarios	WP3	1 - GANIL	Other	Public	36
D3.4	Data Management Plan	WP3	1 - GANIL	Report	Public	36
D3.5	Report on the organisation of GANIL and mock audit on possibilities of ISO certification	WP3	1 - GANIL	Report	Public	36
D3.6	Complete mobility agreement ready for signature	WP3	1 - GANIL	Report	Public	36
D4.1	Business plan for the industrial application activity at GANIL	WP4	1 - GANIL	Report	Public	36
D4.2	Report on the technology transfers developed in the framework of the project	WP4	1 - GANIL	Report	Public	36
D4.3	Report on the increase of innovation potential study	WP4	1 - GANIL	Report	Public	36

Deliverable Number[14]	Deliverable Title	WP number[9]	Lead beneficiary	Type[15]	Dissemination level[16]	Due Date (in months)[17]
D5.1	Information tools for industrial users	WP5	1 - GANIL	Websites, patents filling, etc.	Public	24
D5.2	Report on annual international conferences for GANIL users	WP5	1 - GANIL	Report	Public	36
D5.3	New web site and newsletters for academic users	WP5	1 - GANIL	Websites, patents filling, etc.	Public	24
D5.4	Online and printed communication tools for dissemination of information to the general public	WP5	1 - GANIL	Websites, patents filling, etc.	Public	30
D5.5	Press kit and online contents for journalists	WP5	1 - GANIL	Websites, patents filling, etc.	Public	24

1.3.3. WT3 Work package descriptions

Work package number [9]	WP1	**Lead beneficiary** [10]	1 - GANIL
Work package title	Management		
Start month	1	**End month**	36

Objectives

The WP1 - Management consists of the effective consortium management. It will coordinate all technical, scientific, financial, administrative, contractual and legal activities of the IDEAAL Project. It will oversee issues concerning science and society, and all other issues related to the activities conducted within the project. An appropriate management framework linking together all the project components will be implemented with an experienced and diverse management team and with the dedicated staff having all of the necessary skills.

Description of work and role of partners

WP1 - Management [Months: 1-36]
GANIL
Leader: GANIL
Total person.months (EU/own): GANIL (0/18)

WP1 team will coordinate the actions, organise meetings/workshops, and handle administrative, legal, and financial matters in order to guarantee the Project goals and deliverables. These tasks will be:

Task 1 - Management
• Propose a framework in order to ensure consistency and efficiency in administration and financial management.
• Prepare the Grant and Consortium Agreements. The consortium agreement between all participants will settle questions arising from the assignment of Intellectual Property Rights (IPR).
• Organise meetings of the consortium.
• Represent the project.

Task 2 - Studies and reporting
• Coordinate the reporting work and report submissions.

Task 3 - Dissemination and Exploitation of results
• Create and maintain a web site dedicated to IDEAAL to disseminate and promote the knowledge derived from the various activities of IDEAAL within and beyond the consortium. This website will also be used for the internal communication.
• Write a plan for the dissemination and exploitation of results that will be updated regularly and completed at the end of the project.
• Write a report of completed and planned communication activities.

Participation per Partner

Partner number and short name	WP1 effort
1 - GANIL	0.10
Total	0.10

List of deliverables

Deliverable Number[14]	Deliverable Title	Lead beneficiary	Type[15]	Dissemination level[16]	Due Date (in months)[17]
D1.1	Plan for dissemination and exploitation of results	1 - GANIL	Report	Public	6

Description of deliverables

D1.1 Plan for dissemination and exploitation of results (M6)

D1.1 : Plan for dissemination and exploitation of results [6]

Plan for dissemination and exploitation of results

Schedule of relevant Milestones

Milestone number[18]	Milestone title	Lead beneficiary	Due Date (in months)	Means of verification

Work package number [9]	WP2	Lead beneficiary [10]	2 - CNRS
Work package title	International Coordination and New Partners		
Start month	1	End month	36

Objectives

Starting from January 1st, 2016, the GIE GANIL legal status now allows associated scientific partnerships with national and international collaborating institutions. The WP2 – International Coordination and New Partners will use this new legal opportunity to enlarge the GANIL membership to include academic and/or private institutions. Looking for new partnerships will be based on longstanding collaborations of GANIL with numerous institutions worldwide. In particular, GANIL has been collaborating for decades with German institutions such as GSI where the ESFRI FAIR infrastructure is currently being built. The other priority countries are Poland, Italy, Romania, Belgium, and Sweden in Europe, India and U.S.A. abroad. Other collaborating countries will be approached in a second stage.

Enlargement of the GANIL membership goes hand-in-hand with strengthening the involvement of the present institutional funding partners, and through the addition of possible private sponsors and academic users of GANIL facilities in the governing infrastructure.

Description of work and role of partners

WP2 - International Coordination and New Partners [Months: 1-36]
CNRS, GANIL, CEA, GSI, IFJ PAN
Leader: CNRS & CEA
Partners: GANIL, IFJ PAN, GSI
Total person.months (EU/own): CNRS (38,6/0), CEA (18/0), GANIL (0/28), IFJ PAN (24/14), GSI (40/6)

Task 1 – Enlargement of membership towards academics and involvement of institutional funders
Task leaders: CNRS, CEA
Involved partner: GANIL

The support of regional, national and international partners either for specific development projects and/or for the operating costs of the GANIL infrastructure will be strengthened through new bilateral partnerships. It will open new and sustainable possibilities for GANIL financial support.

The team in charge of Task 1 will:

1. Contact potential future partners and identify the proper contact level for the negotiations.
2. Organise the negotiation team on the GANIL side.
3. Compile information on future partners for the negotiations, such as past and current contributions, agreements and collaborations.
4. Benchmark partner situation and define economical model for each target country.
5. Organise preparatory meetings.
6. Propose the first draft of the bilateral agreement for each potential partner.
7. Organise the signature process, if possible during the time of the IDEAAL project.

With each future partner, different contributions may be negotiated, focused on a scientific priority for investment as a scientific topic (e.g.: Super Heavy Elements, laser spectroscopy, reactions with rare-isotope beams, neutron-induced reactions) or large detectors (e.g.: ACTAR TPC, AGATA, PARIS, FAZIA, GASPARD). The support from ESIF will be explored for every partner.

In order to facilitate contacts with new partners, the Task 1 team will also ensure the active participation of GANIL to national and international related initiatives as national roadmaps for Research Infrastructures, NuPECC – Nuclear Physics European Collaboration Committee (http://www.nupecc.org/) or GSO – Group of Senior Officers on Global Research Infrastructures (http://ec.europa.eu/research/infrastructures/index_en.cfm?pg=international_level).

In parallel to the actions in favour of expanding the GANIL membership, the Task 1 team will propose the creation of a “Euro-Group” of institutional funding partners of GANIL at local, national and international levels. The aim of this action is to increase the interest and involvement of these funders in the evolution of GANIL beyond direct funding. The Euro-Group could consist of representatives of funding agencies supporting GANIL operation and development as the French Ministry of Research, the French National Research Agency, the region of Normandy, the city of Caen, the

European Commission and adequate agencies in partner countries. The Euro-Group would be an observer of GANIL development. Its members would receive regular updates on GANIL progress and strategy. As a consequence, they would be able to better adapt their own funding plans to maximize their efficiency and their commitment with GANIL.

Task 2 - Private sponsors and banks
Task leader: GANIL
Involved partners: CNRS, CEA

Presently, GANIL has no private sponsors. The Task 2 team will explore the possibilities for private foundations and/or individuals to sponsor GANIL, taking the EUFORI Study report as a starting point.

Different actions may support the funding strategy of GANIL targeting particularly financial institutions and potential sponsors:

• Communication: how to explain in non-scientific language our activities in science and technology and most importantly all of their potential applications in energy and medicine.
• Lobbying: how to reach different authorities and private companies and what kind of campaigning can be done.
• Branding: how to change the name GANIL into a brand to promote the recognition of GANIL activities. Financial sponsors will benefit from this new brand image of GANIL.
• Sponsor club: how to start a club of international sponsors interested in the different applications and science linked to our activities. The idea is to get associated with other prestigious institutions that are geographically close to GANIL.
In parallel, the Task 2 team will study possibilities of support from banks as the European Investment Bank and the Council of Europe Development Bank. The Task 2 team will build upon the example of the ARCHADE facility that is presently under construction near GANIL. A major source of funding for this facility is through the Council of Europe Development Bank and several private banks.
Two analyses will be performed in parallel:
• A study for possible strategies to attract private funding for GANIL.
• A legal study to explore possibilities for GANIL to receive and manage private funding.
All of these tasks will require external law counsellors and consultants since GANIL does not have these competencies.

Task 3 – In-kind contributions
Task leader: GSI
Involved partners: GANIL, CEA, CNRS

In-kind contributions (e.g. personnel, equipment) are often a large part of partner contributions to research infrastructures. Therefore, the evaluation of in-kind contributions is a major point of negotiation with partners.

It is essential to define common rules to estimate and to monitor the in-kind contributions.

The Task 3 team will start to establish such rules working on the evaluation of in-kind contributions for the French-German collaboration for FAIR and SPIRAL2, for which a financial agreement was signed in 2015. The French-German agreement for in-kind contributions will form the basis of the negotiations with potential national and international partners of GANIL.
The task comprises the organisation of workshops with in-kind contributors and the teams from GANIL and GSI in the initial evaluation phase as well as the necessary support for the follow-up activities, including a definition of the technical milestones to be reached while carrying out the packages, being integrated in the overall project plans. The role of co-ordinators and committees will be outlined and described in the related documents.

Task 4 - Involvement of academic users– representatives of large collaborations in User Board
Task leader: IFJ PAN
Involved partners: GANIL, CEA, CNRS

This task is dedicated to users' involvement in the GANIL organisation and development.
Since the beginning of the operation of GANIL, its academic users have been organised primarily in "ad-hoc" international collaborations, which propose and perform experiments with support from local GANIL teams. Experiments proposed by these collaborations are selected according to scientific excellence and feasibility by a Programme Advisory Committee (PAC), which is an international expert panel. Following the PAC recommendations, the scheduling of experiments is collaboration exchanges with GANIL teams on scientific, technical, organisational and safety-security aspects.
In general, the information between GANIL management and these research teams is organised through direct exchange with collaboration coordinators; general communication to the community is diffused via conferences, workshops, e-mails, and web sites. It ranges from scientific strategy to practical information on infrastructure organisation and administration procedures.

For several years new, experimental programs are more often being organised in campaigns of measurements driven by strong international collaborations like ACTAR TPC, AGATA, PARIS, INDRA-FAZIA, LISE, or CIMAP. This tendency will be even more developed with the collaborations around SPIRAL2 detection systems, namely NFS, S3 and DESIR.
With the development of GANIL towards an international infrastructure, it is important to further involve users and collaborations in charge of the detection systems in its organisational structure. Users and collaborations have to take part in the GANIL evolution and governance structure.
The team in charge of Task 4 will study how to settle and formalise this involvement taking into account the existing organisational structure of GANIL and collaborations in charge of detection systems. The Task 4 team will take advantage of examples in other international infrastructure in order to enrich this study.
The process of the involvement of users in an organizational structure which will integrate the different groups and detector collaborations; will continuously improve the scientific program for GANIL-SPIRAL2, and will create the possibility to influence the management policy on the science being conducted. This will be done in a few steps:

1. Identification of all collaborations planning to carry out their research at GANIL-SPIRAL2:
a. collaborations gathered around detection systems which are mounted at GANIL permanently,
b. collaborations gathered around detections systems which are foreseen to be brought to GANIL for certain periods of time,
c. collaborations defined by scientific projects focused on certain areas of research.
2. Organization of a kick-off meeting aimed at:
a. reviewing the research activities conducted by the identified collaborations,
b. discussing the organizational structure of a General GANIL-SPIRAL2 Collaboration which involves all of the identified collaborations.
3. Creation of a data base which includes information on all collaborative research groups, their members and all of the equipment at GANIL-SPIRAL2.
4. Creation of a discussion forum regarding all activities related to research at GANIL-SPIRAL2.
5. Working out a structure of the General GANIL-SPIRAL2 Collaboration:
a. establishing committees related to the different areas of activities: scientific programs, equipment, infrastructure,
b. establishing a central body which coordinates the committees activities,
c. working out a system of elections to that central body,
d. working out a form of representation of the General GANIL-SPIRAL2 Collaboration in the GANIL management and its rights in decision making on GANIL-SPIRAL2 policy,
e. definition of the Terms of Reference for the committees of the GANIL-SPIRAL2 Collaboration.
6. Organization of working meetings gathering the representatives of the General GANIL-SPIRAL2 Collaboration (members of the central body and the various committees)
As a conclusion to this study, they will propose to the GANIL management and regulatory authorities an adequate user's organisation including new committees, their terms of reference and membership, decision processes and information exchange.

Participation per Partner

Partner number and short name	WP2 effort
1 - GANIL	0.10
2 - CNRS	38.60
3 - CEA	18.00
4 - GSI	40.00
5 - IFJ PAN	24.00
Total	120.70

List of deliverables

Deliverable Number[14]	Deliverable Title	Lead beneficiary	Type[15]	Dissemination level[16]	Due Date (in months)[17]
D2.1	Draft collaboration agreements negotiated with academic partners	2 - CNRS	Report	Public	36
D2.2	Report on strategic and legal studies for private funding	2 - CNRS	Report	Public	36
D2.3	Procedure of evaluation of in-kind contributions and their monitoring	2 - CNRS	Report	Public	24
D2.4	Report on new organisation involving users	2 - CNRS	Report	Public	30

Description of deliverables

D2.1 Draft agreements with academic partners (M36)
D2.2 Report on strategic and legal studies for private funding (M36)
D2.3 Procedure of evaluation of in-kind contributions and their monitoring (M24)
D2.4 Report on new organisation involving users (M30)

D2.1 : Draft collaboration agreements negotiated with academic partners [36]

Draft collaboration agreements negotiated with academic partners

D2.2 : Report on strategic and legal studies for private funding [36]

Report on strategic and legal studies for private funding

D2.3 : Procedure of evaluation of in-kind contributions and their monitoring [24]

Procedure of evaluation of in-kind contributions and their monitoring

D2.4 : Report on new organisation involving users [30]

Report on new organisation involving users

Schedule of relevant Milestones

Milestone number[18]	Milestone title	Lead beneficiary	Due Date (in months)	Means of verification
MS1	Template of collaboration agreement with academic partners	2 - CNRS	6	Template of collaboration agreement with academic partners
MS2	Report on cash, in-kind and like-kind exchange contributions for target partners	2 - CNRS	18	Report on cash, in-kind and like-kind exchange contributions for target partners
MS3	Report of the already existing contributions from the partner laboratories	2 - CNRS	15	Report of the already existing contributions from the partner laboratories

Schedule of relevant Milestones

Milestone number[18]	Milestone title	Lead beneficiary	Due Date (in months)	Means of verification
MS4	Kick-off meeting of the General GANIL-SPIRAL2 Collaboration	2 - CNRS	12	Kick-off meeting of the General GANIL-SPIRAL2 Collaboration
MS5	Database on research groups and equipments of GANIL-SPIRAL2	2 - CNRS	18	Database on research groups and equipments of GANIL-SPIRAL2

Work package number [9]	WP3	Lead beneficiary [10]	1 - GANIL
Work package title	Excellence of Access to Infrastructure		
Start month	1	End month	36

Objectives

The objective of WP3 – Excellence of Access to Infrastructure is an important qualitative improvement of the user access organisation in order to ensure its constant excellence in the future.
In this aim, the access policies, organisation of logistical support and management of IPRs will be modified for the specific features of SPIRAL2. The costs for serving the users will be assessed for better informing the funding partners and users. A Data Management Plan will be proposed to improve the performance capabilities of GANIL. A personnel exchange and training programme will be drafted with the GANIL partners.

Description of work and role of partners

WP3 - Excellence of Access to Infrastructure [Months: 1-36]
GANIL
Leader: GANIL
Total person.months (EU/own): GANIL (102/28)

Task 1 – Definition of access policies for researchers, organization of the logistic support for researchers, and management of IPRs and ethical issues
Task leader: GANIL

The high-quality access to infrastructures is an essential part of GANIL policy. The whole facility was established and is operating as a user's infrastructure, with a relatively small local user's group and a strong logistical support for several outside users. During periods of operation, researchers require access to the experimental areas anytime (24 hours a day and 7 days a week) during the preparation and the realization of their experiments. The access to a nuclear physics infrastructure must also follow strict safety and security rules.

Therefore the precise definitions of access policies are crucial. These access policies have been defined for the existing GANIL facilities. They now need to be reviewed and updated for the SPIRAL2 facility taking into account the proposed international character of the facility.

In parallel, the organisation of the logistical support for researchers will be updated for the use of the new experimental halls. The local support teams will be reorganised in order to take into account these new halls and instrumentation. The beam time scheduling procedure and corresponding organisation will be improved. For outside users coming to GANIL for experiments,the current organization related to administration will evolve towards a new User Office with dedicated staff members. The Task 1 team will analyse examples of such user offices in other infrastructures and institutions before creating the GANIL User Office. This structure will provide all the necessary support to users for their stays that could range from one day to several months.

The management of Intellectual Property Rights will also be reconsidered and updated if necessary for each step of the experiment process: the proposal for experiment, its preparation and realisation, the data analysis and the communication of results.
The question of ethics will be addressed, although in a limited way as scientific activities at GANIL do not usually involve research on humans, animals, or collection of personal data. Ethical issues will then concern relations with third countries, environment, health, nuclear safety and security. A dedicated ethical code of conduct will be elaborated to be signed by concerned users.

Team in charge of Task 1 will fulfil these actions in collaboration with the Task 2.4 team (Involvement of users).

Task 2 – Assessment of the costs for serving the user
Task leader: GANIL

In order to precisely analyse the service provided by a research infrastructure, it is essential to assess the access costs and more generally the costs for serving the user.

Based on the experience of GANIL since 1983, the Task 2 team will estimate these costs for the new SPIRAL2 facility and experimental halls and different multi-user configurations of the entire GANIL facility.

The study should list among all cost items, those which should be eligible as operation costs, differentiate the basic operation costs from those which are related to experiments, and propose a model for sharing the costs according the use of the beam time. An analysis of what exists in similar research infrastructures should be implemented. At last, the newly established procedure should allow determining the operation costs according to different assumptions of beam time delivery scenarios and used facilities.

A tool will be implemented to easily evaluate the use of the beam time according the entry data.

The results of this study will be communicated to users and funding partners in order to highlight the necessary budget for each experiment. They will be extensively used in negotiations with potential national and international partners of GANIL.

Task 3 – Data management
Task leader: GANIL

The first step for this task aims to achieve two goals : list and describe the types of datas generated by the installation and perform an audit of current and future GANIL users for an evaluation of the amount of data that they plan to produce (short and long term) in their experiments and how they wish to access and use the datasets afterwards.
The audit aims to raise concrete datas (volume, storage duration, etc.) and expectations about data uses and exploitation from questionned persons.

In a second step, the result of this evaluation will be compared to the actual capacity of GANIL and the possible evolution of his data storage infrastructure. Next, an assessment of the data storage needs (both short and long term) will be proposed for GANIL. In this step will be also initiated the data management and access policy ; depending on the wishes and demands expressed by the users during the audit, the main rules and direction for the DMP will be outlined and proposed.

In a last step a study will be performed in order to propose a few scenarios to answer questions about data exploitation regarding the policy proposed in previous step. Namely, should the datas be stored at GANIL ? For how long and what are the ressource needs ? Should the users/collaborations transfer their data to their laboratories ? Should they be able to access datas from their laboratories ? How the datas should be organised to cover the users needs ? How the access and ownership should be granted and managed in a long term sight ? How to assess and ensure the security of this data management ? The question about opening these data (open data movement, open data initiative) should be addressed in this step as well including the description, the metadata, and licenses.

Each scenario will be assessed , its feasibility and cost evaluated ; the best scenario will be choose as a basis for the redaction of DMP.

With all the estimated and studied scopes, the needed inputs will be gathered to define precisly the data management policy ; finally the DMP will be written.

Task 4 – How to improve efficiency: study of GANIL performance capabilities
Task leader: GANIL

In order to optimize the performance capabilities of GANIL, the project aims at the analysis of efficiency in terms of providing beam, realisation of experiments, project coordination, etc.

The first step will be to analyse existing technical and administrative organisation of GANIL, for instance access to the infrastructure for academic and industrial users or purchasing rules. In a second step, the Task 4 team will use the results of this analysis to propose improvements in order to increase the excellence of operational performance and to optimize use of resources. The goal of this action is also to acquire an ISO certification. Therefore, the final result of Task 4 will be a report on a mock audit in order to evaluate the improvements of the operational performance of GANIL and the chances to receive an ISO certification.

In this aim, the Task 4 team will work with a group of experts from research infrastructures of similar size in order to exchange good practices. In parallel, a specialized consulting company will analyse the internal organisation of GANIL.

The study of GANIL performance capabilities will be communicated to the funding partners contributing to the elaboration of their middle and long-term policies towards operation and further development of GANIL facility.

Task 5 – Organisation of personnel exchange and training
Task leader: GANIL

One of the most important aspects of research infrastructure is the management of human resources. Research infrastructures rely upon highly qualified personnel, continuously improving their knowledge and know-how.

The Task 5 team will collaborate with GANIL partners in order to evaluate the possible common tools and resources to develop short and long-term staff exchanges and mutual training. The goal of this action is to increase the professional skills of GANIL staff and of partner personnel in order to benefit from the largest possible pool of experts for GANIL facilities and instrumentation. All personnel, from technicians to engineers who contribute to the operation of the facility, will be concerned by this mobility scheme.

The possibility to use already existing schemes, e.g in the framework of nuclear fusion activities, or to adapt them to the needs, will be studied. The legal aspects of the proposed mobility schemes will be triggered, in relationship with the labour code and the appropriate tax regulations. Once a scheme is defined, it is proposed to test it with two long-term staff-exchange schemes on the GANIL premises. A test period of 12 to 18 months is envisaged.

In parallel, the Task 5 team will explore the possibility to create a specific department (or departments) for scientists belonging to a partner and who will work regularly for long periods at GANIL.

The study will also include financial support options, such as the European actions MSCA-RISE or H2020 Widening actions. A specific budget allocation will also be included for mobility purposes, via the negotiations, in the next European framework programme, and will possibly be extended to all large research infrastructures.

By the end of the IDEAAL project, the Task 5 team will propose a draft of a mobility agreement for every potential partner of GANIL towards a network for personnel exchange and training within the community using GANIL. The results obtained in Task 5 will be extensively used in negotiations with potential national and international partners of GANIL.

Participation per Partner

Partner number and short name	WP3 effort
1 - GANIL	102.00
Total	102.00

List of deliverables

Deliverable Number[14]	Deliverable Title	Lead beneficiary	Type[15]	Dissemination level[16]	Due Date (in months)[17]
D3.1	Access policy rules for academic and industrial users of GANIL	1 - GANIL	Report	Public	36
D3.2	Creation of a new User Office	1 - GANIL	Other	Public	24
D3.3	Tool for operation costs modeling according to beam time and experiments scenarios	1 - GANIL	Other	Public	36
D3.4	Data Management Plan	1 - GANIL	Report	Public	36
D3.5	Report on the organisation of GANIL and mock audit on possibilities of ISO certification	1 - GANIL	Report	Public	36
D3.6	Complete mobility agreement ready for signature	1 - GANIL	Report	Public	36

Description of deliverables

D3.1 Access policy rules for academic and industrial users of GANIL (M36)
D3.2 Creation of a new User Office (M24)
D3.3 Tool for operation costs modeling according to beam time and experiments scenarios (M36)
D3.4 Data Management Plan (M36)
D3.5 Report on the organisation of GANIL and mock audit on possibilities of ISO certification (M36)
D3.6 Complete mobility agreement ready for signature (M36)

D3.1 : Access policy rules for academic and industrial users of GANIL [36]

Access policy rules for academic and industrial users of GANIL

D3.2 : Creation of a new User Office [24]

Creation of a new User Office

D3.3 : Tool for operation costs modeling according to beam time and experiments scenarios [36]

Tool for operation costs modeling according to beam time and experiments scenarios

D3.4 : Data Management Plan [36]

Data Management Plan

D3.5 : Report on the organisation of GANIL and mock audit on possibilities of ISO certification [36]

Report on the organisation of GANIL and mock audit on possibilities of ISO certification

D3.6 : Complete mobility agreement ready for signature [36]

Complete mobility agreement ready for signature

Schedule of relevant Milestones

Milestone number[18]	**Milestone title**	**Lead beneficiary**	**Due Date (in months)**	**Means of verification**
MS6	Ethical code of conduct for users	1 - GANIL	18	Ethical code of conduct for users
MS7	Report on data management strategy	1 - GANIL	12	Report on data management strategy
MS8	Assessment of data storage needs at GANIL	1 - GANIL	24	Assessment of data storage needs at GANIL
MS9	Analysis of existing technical and administrative organisation	1 - GANIL	6	Analysis of existing technical and administrative organisation
MS10	First version of mobility agreement	1 - GANIL	24	First version of mobility agreement

Work package number [9]	WP4	Lead beneficiary [10]	1 - GANIL
Work package title	Innovation and Industries		
Start month	1	End month	36

Objectives

The WP4 – Innovation and Industries will focus on actions towards industrial users and on actions on industrial valorisation and innovation.

These actions will be of general interest. Access dedicated for new applications to the existing GANIL accelerators and to the new SPIRAL2 facility, proposal on involvement of industrial users within the GANIL organisation, general support for industrial applications and technology transfer, and for the increase of innovation potential for GANIL.

Two specific topics will also be developed as they are subjects of dedicated R&D developments at GANIL: the technology and know-how transfer for beam profile monitors and the definition of a methodology for technology transfer for the production of radioisotopes. These will allow to test and improve the proposed organisational schemes.

Description of work and role of partners

WP4 - Innovation and Industries [Months: 1-36]
GANIL, CEA, Nucleopolis
Leader: GANIL
Involved partners: Nucléopolis, CEA
Total person.months (EU/own): GANIL (30/10), Nucléopolis (30/0), CEA (6/0)

Task 1 – Limited pilots of access provision to research teams from industries and involvement of industrial users
Task Leader: GANIL

Objectives
Limited pilots of access provision to GANIL and SPIRAL2 will be proposed to research teams for new applications, therefore exclusively for teams from industries. The goal is to convince the industries of the interest of the new accelerator SPIRAL2, for their measurements and applications, and to attract more industries for new applications through the use of the GANIL accelerators.
In parallel, the Task 1 team will discuss with major industrial users how to increase their involvement in the organisation of GANIL.

Provision of access to the following infrastructure(s): GANIL and SPIRAL2@GANIL

Name of the infrastructure: GANIL and Système de production d'Ions Radioactifs en Ligne de 2ème génération (SPIRAL2) au Grand Accélérateur National d'Ions Lourds
Location of the infrastructure: Caen, FRANCE
Web site address: http://www.ganil-spiral2.eu/
Annual operating costs: 8,000,000 € (without manpower), 22,300,000 € (including manpower)

Description of the infrastructure:
GANIL is one of the major nuclear-physics facilities in the world with SPIRAL2 selected on the ESFRI list.
We describe here GANIL and the SPIRAL2 facility that will be used in the framework of the IDEAAL project.
GANIL is an interdisciplinary large-scale facility for French and International communities dedicated to research delivering ion beams from Carbon to Uranium at energies from a few keV/A up to 95 MeV/A for light ions, and the fields of research range from radiotherapy to the physics of the atom and its nucleus, from condensed matter to astrophysics. These beams are also available under certain conditions for applied physics and industrial applications, like membrane production or space components irradiation.
SPIRAL 2 Phase 1 (to be operational from 2016): superconducting linear accelerator (SC LINAC) accelerating beams from protons to heavy-ions with A/Q=2 in the energy range from 0.75 MeV/u to 20 MeV/u (up to 33 MeV for protons, up to 14.5 MeV/u for heavy ions).
The SC LINAC will deliver beams with the highest intensities in the world for this energy range (up to 5 mA for deuterons and up to 1 mA for heavy-ions).
The laboratory has access to the major computing centres of the CNRS (CC IN2P3 in Lyon) and the CEA.

Services currently offered by the infrastructure:

All stable and rare isotope beams and all experimental areas at GANIL are open to external users. Each area has both a technical and a scientific coordinator, who act as liaisons with the outside users. They provide assistance to the users with regards to setting up and performing their experiments.
GANIL presently provides around 5000 hours of beam time per year. This corresponds to 40-50 experiments on average. From 2017, SPIRAL2 will provide an additional 2500-3000 hours approximately of beam time per year for users.
Around 700 scientists come annually to the facility, with about 300 physicists from the EU (non-national) and associated countries. International users contribute actively to funding and construction of all major experimental devices and new halls of GANIL/SPIRAL2 with an overall budget exceeding 2 M€. Around ten teams from industries and European spatial agencies come regularly to GANIL and use about 10% of the total beam time each year.
The average number of scientific publications related to GANIL experiments is around 130 per year.

Description of work
Modality of access under this proposal:
At GANIL, the beam schedule is mainly decided according to the experiments for fundamental research selected as a function of their scientific merit, by an International Programme Advisory Committee (PAC). The beam time dedicated to industrial users is defined from this beam schedule. The beam schedule is finalized 3 months before the start of the next beam period. The duration of a user's stay can range between a few days for the short solid-state physics experiments to several weeks for long nuclear physics experiments or campaigns of experiments. The users have to follow a specific procedure for any experiment, after it has been included in the GANIL beam schedule. The spokespersons receive several documents which are used as a basis to define more precisely the conditions of the experiment: beam optics, beam quality, detection systems, list of targets, expected data-acquisition support, specific needs (cryogenics needs, use of explosive gases and other materials) and the corresponding safety, security and radioprotection requirements. Allocation of beam time implies that the users group will benefit from all the laboratory infrastructures and equipment during their stay. The unit cost is determined taking into account consumables, energy and maintenance costs necessary to provide heavy-ion beams during one hour. The outputs of the experiments are the experimental data stored on disks that the research teams take back to their home laboratories for analysis.

Support offered under this proposal:
Scientific and technical assistance is routinely provided to GANIL users, in the experimental halls where scientific and technical coordinators take part in the set-up of the experiments including the electronics and associated data-acquisition systems. The beam is tuned to the user's experimental setup by beam operators and liaison scientists. The facilities user support provides access to the computers and networks, to data-storage devices, to workshops, and to electronics laboratories.
GANIL users also benefit from the local logistical infrastructure: a guest house, cafeteria, library and a general store for materials, components, and supplies.

Outreach to new users:
Information about GANIL facilities (technical and scientific information, calls for proposals, European support) is available online: http://pro.ganil-spiral2.eu/users-guide/ganil-users and widely announced via extended email lists.
All workshops and conferences organised by GANIL are also widely advertised by email, and through information posted on the GANIL website.
For industrial applications, outreach is achieved via an active participation in the RADECS association that gathers companies and beam providers, and also through participation in related conferences. The GANIL and SPIRAL2 facilities deliver beams unique in Europe, in terms of ion beam energy and intensity (for both ion and neutron beams).
The number of users will increase with the new facility SPIRAL2 Phase 1 by about 200, as it will provide an additional 2500-3000 hours of beam time per year to current and new users. All GANIL users are registered which allows for an easy monitoring of their number on an annual basis.

Review procedure under this proposal:
Today, when a company submits a written proposal to conduct an experiment at GANIL, the proposal is analysed by the GANIL innovation officer and GANIL management. The beam time is granted according to availability. A price quotation is sent to the company for their approval, 2 months before the experiment.
Task1 will finance the beam time for some industrial experiments, in particular new experiments that would like to test the capabilities of the GANIL facility, or to test some new experimental conditions, before confirming their interest in GANIL beams.
A dedicated international selection panel will be created to assess the proposed experiments.
A total of 240 beam hours over 36 months will be financed for the industrial users. The estimated unit cost corresponds to the price usually paid by industries to use GANIL beams.

Involvement of industrial partners in the GANIL organisation

In the framework of the IDEAAL project, a study will be performed with a selection of industrial users (among those using GANIL and SPIRAL2 facilities) on the possible involvement of these industries in the GANIL organisation. This study will include a proposal of a business plan for the industrial application activity at GANIL. The objective is to significantly increase the turnover of this activity at GANIL by the end of the IDEAAL Project.

Task 2 – Industrial Applications and Technology Transfer
Task Leader: Nucléopolis
Involved partner: GANIL

Today, GANIL is one of the four largest laboratories in the world for research using beams of ions. The construction of the SPIRAL2 facility constitutes a real technical and scientific advance for both France and Europe. GANIL will remain a leading facility for various fields of basic research in nuclear physics. Nevertheless an important place is reserved for industrial applications of the beams delivered by the facility. Very low-, low-, medium- or high-energy beams are available for various industrial users.
Beyond this main activity (beam production and fundamental and applied research), the operation and the continuous development of GANIL makes this equipment a kind of technology platform that can allow other types of interaction with industrial companies with the overall objective on industrial development. Indeed, to develop and run this facility, a very large field of technology is used at GANIL, most of them at the forefront of progress. Every type of collaboration is conceivable: expertise, collaborative research, licensing of patents or know-how...They can be seen in two domains:

The provision of technical and human resources - With the status of Nuclear Installation and with close operations of a production facility, GANIL can also be used under certain conditions (eg during a maintenance period) as support to outside companies for the development, testing and validation of their products, services or even for training (GANIL as a training site). For instance: development of tools for validation and radiation protection, and means of simulation. GANIL also has a large team of engineers and technicians with skills and even expertise in many areas relevant to industry: electronics, particle detectors, mechanics, vacuum technologies, command & control ... All of these persons might be included (for advice, expertise and technical assistance) in industrial projects, both for industrial development as well as for applied R & D.
In particular, the project has to analyse with ARCHADE (see task 2.4 for description of ARCHADE) to consolidate the interactions between GANIL and ARCHADE, especially on the industrial point of view and with the new “Normandy-Hadronthérapie” company. An industrial consortium constituted by the IBA group and highly committed French industrial partners, aims at developing, validating and manufacturing – in Caen – a new latest generation particle accelerator (for protons and carbon ions), the Cyclone®400 cyclotron.

Technology transfers - Continuous development of the accelerators, but also of the associated instrumentation (and especially the experimental equipment) leads to studies, design and manufacturing of technical means that could have other applications in many industrial sectors (aeronautics, chemistry, health, automotive ...). If these technology transfers are still underdeveloped, there is a large transfer potential which could be a major source of revenue for GANIL.

The objectives of Task 2 are to:
• Identify and map the industrial application potential of GANIL activities
• Define a general implementation method
• Launch the implementation of these industrial applications, particularly in two areas where this potential has already been identified:
o beam diagnostic system ("beam profile monitor")
o production of radioisotopes

Sub Task 2.1 : Provide industrial application tools to GANIL
Coordination: Nucléopolis

Objectives of Sub Task 2.1 are to:
• Realize the mappings of the existing potential:
o Transferable technologies
o Available skills and expertise
• Identify new areas for industrial applications ("market research")
• Identify companies by realizing a panel of "customers" in line with the base of GANIL suppliers but also with the directory of Nucléopolis members, with industrial and innovative companies in the region of Normandy and across Europe :
o Potential customers for the use of beams, equipment or research skills
o Candidates to transfer industrialization of devices from GANIL
• Build the implementation arrangements for transfers, for the production of radioisotopes or for the provision of resources (human and technical): financial and legal aspects, practical implementation...

• Build tools to promote this activity in connection with the communication service (cf. WP5)

Sub Task 2.2: Operational implementation – general case
Coordinator: Nucléopolis

This is to allow the "matching" between industrial application opportunities and the companies identified in Sub Task 2.1. Two modes are available :
• Organization of exchange meetings
o Organization of B2B meetings between GANIL internal stakeholders and companies identified in Sub Task 2.1
o Increase of the industrial component during the international "GANIL-SPIRAL2 Week" conference and GANIL conferences.
o Set up a virtual trading place on the website
• Participation in exhibitions: the first step is to identify reference fairs on the industrial areas identified in Sub-Task 2.2 (e.g. WNE event for nuclear energy), scientific symposia with an industrial exhibition dimension (e.g. RSNA in Radiology, EANM in nuclear medicine) or industrial days of Large Research Infrastructure ("France at CERN", ESS industrial days, ITER Business Forum)

Sub Task 2.3 : Operational implementation - Support for the technology transfer of the beam profile monitors
Coordinator: GANIL

GANIL has, for several years, been developing a type of beam diagnostic called a “Beam profile monitor”, which is used to measure the beam dimensions. Up to now, GANIL has been producing itself the units necessary for its own needs and for the needs of other nuclear physics laboratories as well. For human resource reasons, and to increase technology transfer towards industry, the time has come for GANIL to transfer this expertise to a company, for the mass production of these beam monitors.
The technology and know-how transfer activity generally requires several studies concerning the legal aspects, the economical aspects and the marketing aspects. In particular on this precise subject, detailed studies of the various contracts need to be performed, as GANIL will continue the R&D activity on these beam monitors, in close collaboration with the company.
The project will allow supporting these different studies and writing of the final technology transfer and collaboration contracts.

SubTask 2.4 : Operational implementation - innovative radio-isotope production
Coordination: Nucléopolis

Radioisotopes are a new research topic at GANIL that will be tremendously enhanced with the new facility SPIRAL2. Radioisotopes, in general radiopharmaceuticals, are more and more essential for cancer treatments.
Indeed, chronic diseases such as cancer, brain and cardiovascular disorders constitute a societal burden. Conventional cancer treatments such as chemotherapy and hormone therapy are transiently effective, toxic and expensive. In such instances, radiopharmaceutical innovation holds great promise for diagnosis and therapy. Radiopharmaceuticals are drugs that contain radionuclides emitting ionizing radiation with imaging and/or cytotoxic properties.
In France, Normandy boasts an exceptional scientific, technological, medical and industrial environment in the field of nuclear science applied to health (medical imaging and radiotherapy), covering the entire value chain from fundamental research to clinical development. Caen, in Normandy, has chosen to improve knowledge about nuclear sciences and applications specifically in health. The "Plateau Nord", a research and innovation Science Park located in the vicinity of the GANIL and the CYCERON medical imaging platform combines internationally renowned skills in the field of radiobiology, radiopharmacy, radiochemistry, hadrontherapy, dosimetry, instrumentation, beam control, medical imaging, image analysis and radioprotection. In addition, a foundation project aimed at creating a European Hadrontherapy Resource Centre, ARCHADE, is built on the “Plateau Nord”.
Since 2014, researchers from Caen (GANIL, LPC) and from Nantes (ARRONAX) have initiated a collaborative project aimed at studying the production of an innovative radioisotope: astatine-211. R&D on astatine-211 will be performed at the GANIL-SPIRAL2 facility.
In this context, the R&D program for innovative radioisotope production has been gaining the interest from the industrial side. The definition of a methodology for the technology transfer of this activity towards industry is thus very important and will be defined in the 2.1 sub-task. The project will then study with the radiopharmaceuticals industries the possibility to produce innovative radio-isotopes.

Task 3 - Increase of innovation potential
Task leader: GANIL
Involved partner: CEA

The objectives of this task are to study the possibilities of increasing the innovation potential of the GANIL laboratory. This thematic is becoming more and more important in the national and international context, and the GANIL facility can offer, through its specificities and its various scientific and technical developments, a lot of new application fields and innovations.

A systematic and detailed analysis will be performed, in order to identify:
• New applications with the use of heavy and light ion beams (GANIL and SPIRAL2 facilities) and new fast neutron beams produced by the SPIRAL2 facility. In the framework of the development of the accelerator technology to replace the reactor one, for as many applications as possible (international requirement, in particular by the International Atomic Energy Agency), many applications with accelerator beams have been identified, and the study will consist in evaluating the capability and added value of the GANIL facility for these new applications.
• New R&D activities in the expertise domains of the laboratory, potentially leading to innovative technology and innovative applications.
• The evolution of the facilities to be proposed, in terms of technical and organizational/operational changes, to lead to a substantial increase of beam time for industrial users, and to increase the R&D activity in the laboratory for more participation in innovation activities.
The study will describe all subjects identified, and will include the economical and commercial aspects related to the various items.
This detailed and complete study is proposed to be performed by specialists in valorisation of scientific activities, in particular persons from the CEA/DRF valorisation department. The persons will naturally have to work closely with the concerned scientific and technical experts of the laboratory, and GANIL management.

Participation per Partner

Partner number and short name	WP4 effort
1 - GANIL	30.00
3 - CEA	6.00
6 - Nucleopolis	30.00
Total	66.00

List of deliverables

Deliverable Number[14]	Deliverable Title	Lead beneficiary	Type[15]	Dissemination level[16]	Due Date (in months)[17]
D4.1	Business plan for the industrial application activity at GANIL	1 - GANIL	Report	Public	36
D4.2	Report on the technology transfers developed in the framework of the project	1 - GANIL	Report	Public	36
D4.3	Report on the increase of innovation potential study	1 - GANIL	Report	Public	36

Description of deliverables

D4.1 Business plan for the industrial application activities at GANIL (M36)
D4.2 Report on the technology transfers developed in the framework of the project (M36)
D4.3 Report on the increase of innovation potential study (M36)

D4.1 : Business plan for the industrial application activity at GANIL [36]

Business plan for the industrial application activity at GANIL

D4.2 : Report on the technology transfers developed in the framework of the project [36]

Report on the technology transfers developed in the framework of the project

D4.3 : Report on the increase of innovation potential study [36]

Report on the increase of innovation potential study

Schedule of relevant Milestones

Milestone number[18]	**Milestone title**	**Lead beneficiary**	**Due Date (in months)**	**Means of verification**
MS11	Beam profile monitors: Licence contract and R&D collaboration contract with the company	1 - GANIL	6	Beam profile monitors: Licence contract and R&D collaboration contract with the company
MS12	Report on the methodology for the technology transfer for radioisotope production	1 - GANIL	30	Report on the methodology for the technology transfer for radioisotope production

Work package number [9]	WP5	Lead beneficiary [10]	1 - GANIL
Work package title	Communication and Outreach		
Start month	1	End month	36

Objectives

The WP5 – Communication and Outreach activities will strongly support WP2, WP3 and WP4 actions in order to optimize their effects. It will fulfil general objectives of an optimized communication of GANIL research topics, highlights and practical information to anyone professionally or personally interested by GANIL activities.

In this aim, specific communication actions will be developed towards users, members and funders of infrastructure, towards the layman and the media. Appropriate key messages will be formulated to each audience.

Description of work and role of partners

WP5 - Communication and Outreach [Months: 1-36]
GANIL
Leader: GANIL
Total person.months (EU/own): GANIL (60/6)

Task 1 – Towards members and funding partners
Task Leader: GANIL

It is essential to diffuse information towards members and funding partners in order to advise them about results obtained that could not be achieved without their financial support.
The existing communication towards members and funding partners will be enhanced through different actions:
• Preparation of dedicated communication tools will be implemented in connection with WP2 task 2 to find new private funders and sponsors.
• The GANIL communication service will work in collaboration with the communication services of regulatory authorities (CEA and CNRS), international partners and local authorities in order to use the communication tools already developed by each service (websites, newsletters…) and to coordinate the promotion of international joint projects.
• In this aim, a local communication network will be created in order to favour exchange of information between GANIL, the local funding partners and members and the public. This action will improve the communication particularly towards general public (see task 3).
• A summary activity report will be sent annually to members and funding partners to present the scientific and technical developments at GANIL.

Task 2 – Towards users (academics and industries)
Task leader: GANIL

Users need information about GANIL organisation in order to optimize the coordination of their experiments, and more generally, to ensure a high level of collaboration with GANIL teams.

Various tools will be developed to improve this information flux:
• Upgrade of the users web site, in order to optimize the search for information in preparation of experiments, meetings, and conferences. Results of partnerships between GANIL and national and international partners will be highlighted in a dedicated section.
• Creation of a GANIL newsletter for users for regular information about major GANIL events and common projects with its partners.
• An annual report of scientific and technical activities.
• An annual international conference focused on the GANIL community.
For industrial users, the Task 2 team will create specialized information and promotional tools such as leaflets and brochures. A dedicated web site will be set up to optimize the preparation of their experiments at GANIL and to provide all practical information (contacts, on-line maps, access conditions). In addition, GANIL will be advertised in specialized press. In this activity, it may be useful to use a firm specializing in marketing to help to define specific communication strategies for an industrial target and to define the specifications of communication tools. These actions will be built in close connection with Work Package 4.

Task 3 – Towards the layman

For a research infrastructure, communication to the general public is crucial for several reasons. One of them, concerning financial resources, is that public funds come from taxes. It is then a fair return to inform the public about the results produced from the use of these public funds. In addition, the general public is interested in science and its applications as evidenced by the growing popularity of the annual GANIL "Open House". Finally, the communication actions towards the general public make people aware of the dynamic nature of the scientific community and to bring forward international joint projects.

With the start of SPIRAL2, special actions are necessary to communicate about this new infrastructure. The Task 3 team will organize:
• A travelling exhibition about GANIL, to be presented within GANIL and on the sites of its partners.
• Seminars of GANIL researchers during the French Science Festival and in partners' countries.
• A virtual visit of GANIL to be available online to present the laboratory to local and foreign non-experts.
• Videos of GANIL, broadcasted on GANIL web TV and online platforms developed by partners.
• Brochures about GANIL (including teaching material, institutional and scientific information) as an introduction for visitors and provided to local, national and international partners.
More generally, the Task 3 team will propose a digital strategy for GANIL for the duration of the IDEAAL project and beyond. The digital strategy will explore and take into account all digital tools: social networks, videos platforms, websites and reciprocal exchanges of link strategies. These tools will be developed consistently with websites and editorial strategies.
In parallel, artistic partnerships will be implemented. The expected results are presentations of GANIL that will be complementary to what scientists usually do. The layman will then benefit from a different point of view on science in a research infrastructure.

Task 4 – Towards press
Developing as an international research infrastructure, GANIL needs to increase the communication actions towards press at a local, national and international level, with general and specialized press (industrial, scientific…).
Therefore, the Task 4 team will develop regular relationships with the press, instead of a case-by-case approach.
In addition, a press kit on GANIL will be created. It will summarize all general and institutional information about GANIL. A specific press area will be created on the GANIL web site to provide specific contents to journalists (press releases, copyright-free pictures, press contacts).

Participation per Partner

Partner number and short name	WP5 effort
1 - GANIL	60.00
Total	60.00

List of deliverables

Deliverable Number[14]	Deliverable Title	Lead beneficiary	Type[15]	Dissemination level[16]	Due Date (in months)[17]
D5.1	Information tools for industrial users	1 - GANIL	Websites, patents filling, etc.	Public	24
D5.2	Report on annual international conferences for GANIL users	1 - GANIL	Report	Public	36
D5.3	New web site and newsletters for academic users	1 - GANIL	Websites, patents filling, etc.	Public	24

List of deliverables

Deliverable Number[14]	Deliverable Title	Lead beneficiary	Type[15]	Dissemination level[16]	Due Date (in months)[17]
D5.4	Online and printed communication tools for dissemination of information to the general public	1 - GANIL	Websites, patents filling, etc.	Public	30
D5.5	Press kit and online contents for journalists	1 - GANIL	Websites, patents filling, etc.	Public	24

Description of deliverables

D5.1 Information tools for industrial users (M24)
D5.2 Annual international conferences for GANIL users (M36)
D5.3 New web site and newsletters for academic users (M24)
D5.4 Online and printed communication tools for dissemination of information to the general public (M30)

D5.1 : Information tools for industrial users [24]

Information tools for industrial users

D5.2 : Report on annual international conferences for GANIL users [36]

Report on annual international conferences for GANIL users

D5.3 : New web site and newsletters for academic users [24]

New web site and newsletters for academic users

D5.4 : Online and printed communication tools for dissemination of information to the general public [30]

Online and printed communication tools for dissemination of information to the general public

D5.5 : Press kit and online contents for journalists [24]

Press kit and online contents for journalists

Schedule of relevant Milestones

Milestone number[18]	Milestone title	Lead beneficiary	Due Date (in months)	Means of verification

1.3.4. WT4 List of milestones

Milestone number[18]	Milestone title	WP number[9]	Lead beneficiary	Due Date (in months)[17]	Means of verification
MS1	Template of collaboration agreement with academic partners	WP2	2 - CNRS	6	Template of collaboration agreement with academic partners
MS2	Report on cash, in-kind and like-kind exchange contributions for target partners	WP2	2 - CNRS	18	Report on cash, in-kind and like-kind exchange contributions for target partners
MS3	Report of the already existing contributions from the partner laboratories	WP2	2 - CNRS	15	Report of the already existing contributions from the partner laboratories
MS4	Kick-off meeting of the General GANIL-SPIRAL2 Collaboration	WP2	2 - CNRS	12	Kick-off meeting of the General GANIL-SPIRAL2 Collaboration
MS5	Database on research groups and equipments of GANIL-SPIRAL2	WP2	2 - CNRS	18	Database on research groups and equipments of GANIL-SPIRAL2
MS6	Ethical code of conduct for users	WP3	1 - GANIL	18	Ethical code of conduct for users
MS7	Report on data management strategy	WP3	1 - GANIL	12	Report on data management strategy
MS8	Assessment of data storage needs at GANIL	WP3	1 - GANIL	24	Assessment of data storage needs at GANIL
MS9	Analysis of existing technical and administrative organisation	WP3	1 - GANIL	6	Analysis of existing technical and administrative organisation
MS10	First version of mobility agreement	WP3	1 - GANIL	24	First version of mobility agreement
MS11	Beam profile monitors: Licence contract and R&D collaboration contract with the company	WP4	1 - GANIL	6	Beam profile monitors: Licence contract and R&D collaboration contract with the company
MS12	Report on the methodology for the technology transfer for radioisotope production	WP4	1 - GANIL	30	Report on the methodology for the technology transfer for radioisotope production

1.3.5. WT5 Critical Implementation risks and mitigation actions

Risk number	Description of risk	WP Number	Proposed risk-mitigation measures
1	Financial	WP1, WP2, WP3, WP4, WP5	Planning and regular monitoring of spending by the coordinator and steering committee
2	Human	WP1, WP2, WP3, WP4, WP5	Identify a deputy to the work package leader
3	Human: lack of personnel per task	WP1, WP2, WP3, WP4, WP5	EU funding for personnel is supported where possible with realistic own contributions. Overall personnel is closely monitored within the WP and by each task leader.
4	Human: inability to find proper candidates for positions	WP1, WP2, WP3, WP4, WP5	The call for positions will be communicated as soon as possible and if necessary on an international level.
5	Non comprehensive view on the data of each partner	WP1	Creation of an IDEAAL web site + a biannual meeting with WP leaders.
6	Technical or legal issues slowing down negotiations with partners	WP2	Negotiations have to be prepared from the beginning of the project. Negotiations have to start as soon as possible.
7	Non necessity to improve the involvement of existing fruitful collaborations	WP2	A compact and rather detailed list of attractive propositions to each partner is helpful to gain on reliability (“bottom up” approach)
8	Difficulty to create Euro-Group	WP2	Information to future members at the very beginning of the project.
9	Scheduling issue due to unavailability of users and difficulties to get interviews and answers	WP3	Contact users for interviews as soon as possible Recruit the DMP interviewer/writer as soon as possible
10	Process risk due to lack of responses from users	WP3	Foresee to contact enough users to have sufficient answers (half expected) Use online tools to contact users (Video, online meeting, web, etc)
11	Inadequacy of contracts for staff exchanges	WP3	Consult other European infrastructure to get existing models of contracts and exchanges schemes
12	Inadequacy on training schemes between different countries	WP3	Consult other European infrastructures to get existing models of training schemes
13	Difficulty to find users for access pilots	WP4	Advertise early and widely the new opportunity for experiments at SPIRAL2.
14	Technical risk on accelerator to deliver beam	WP4	Delay experiment in the second half and adapt the beam schedule.
15	Technology transfers: unexpected delay in the negotiations	WP4	Start the technology transfer at the very beginning of the project.
16	Difficulty to organise the travelling exhibition on partner premises	WP5	Inform the partners about this action already during the preparation of the exhibition in order to adapt its configuration.

1.3.6. WT6 Summary of project effort in person-months

	WP1	WP2	WP3	WP4	WP5	Total Person/Months per Participant
1 - GANIL	0.10	0.10	102	30	60	192.20
2 - CNRS	0	38.60	0	0	0	38.60
3 - CEA	0	18	0	6	0	24
4 - GSI	0	40	0	0	0	40
5 - IFJ PAN	0	24	0	0	0	24
6 - Nucleopolis	0	0	0	30	0	30
Total Person/Months	0.10	120.70	102	66	60	348.80

1.3.7. WT7 Tentative schedule of project reviews

Review number [19]	Tentative timing	Planned venue of review	Comments, if any
RV1	21	tbc	mid-term review
RV2	36	tbc	final review

1.3.8. WT8 Summary of transnational / virtual access provision per installation

Access provider short name	Short name of infrastructure	Installation		Installation country code[21]	Type of access[22]	Unit of access	Unit cost (€)	Min. quantity of access to be provided	Access costs[23]		Estimated number of users	Estimated number of projects
		number[20]	Short name						On the basis of UC	As actual costs		
1 - GANIL	GANIL	1	GANIL	FR	TA-uc	Beam hour	936	240.0	224640		45	15

1. Project number

The project number has been assigned by the Commission as the unique identifier for your project. It cannot be changed. The project number **should appear on each page of the grant agreement preparation documents (part A and part B)** to prevent errors during its handling.

2. Project acronym

Use the project acronym as given in the submitted proposal. It can generally not be changed. The same acronym **should appear on each page of the grant agreement preparation documents (part A and part B)** to prevent errors during its handling.

3. Project title

Use the title (preferably no longer than 200 characters) as indicated in the submitted proposal. Minor corrections are possible if agreed during the preparation of the grant agreement.

4. Starting date

Unless a specific (fixed) starting date is duly justified and agreed upon during the preparation of the Grant Agreement, the project will start on the first day of the month following the entry into force of the Grant Agreement (NB : entry into force = signature by the Commission). Please note that if a fixed starting date is used, you will be required to provide a written justification.

5. Duration

Insert the duration of the project in full months.

6. Call (part) identifier

The Call (part) identifier is the reference number given in the call or part of the call you were addressing, as indicated in the publication of the call in the Official Journal of the European Union. You have to use the identifier given by the Commission in the letter inviting to prepare the grant agreement.

7. Abstract

8. Project Entry Month

The month at which the participant joined the consortium, month 1 marking the start date of the project, and all other start dates being relative to this start date.

9. Work Package number

Work package number: WP1, WP2, WP3, ..., WPn

10. Lead beneficiary

This must be one of the beneficiaries in the grant (not a third party) - Number of the beneficiary leading the work in this work package

11. Person-months per work package

The total number of person-months allocated to each work package.

12. Start month

Relative start date for the work in the specific work packages, month 1 marking the start date of the project, and all other start dates being relative to this start date.

13. End month

Relative end date, month 1 marking the start date of the project, and all end dates being relative to this start date.

14. Deliverable number

Deliverable numbers: D1 - Dn

15. Type

Please indicate the type of the deliverable using one of the following codes:

R	Document, report
DEM	Demonstrator, pilot, prototype
DEC	Websites, patent fillings, videos, etc.
OTHER	
ETHICS	Ethics requirement

16. Dissemination level

Please indicate the dissemination level using one of the following codes:

PU	Public
CO	Confidential, only for members of the consortium (including the Commission Services)
EU-RES	Classified Information: RESTREINT UE (Commission Decision 2005/444/EC)
EU-CON	Classified Information: CONFIDENTIEL UE (Commission Decision 2005/444/EC)
EU-SEC	Classified Information: SECRET UE (Commission Decision 2005/444/EC)

17. Delivery date for Deliverable

Month in which the deliverables will be available, month 1 marking the start date of the project, and all delivery dates being relative to this start date.

18. Milestone number

Milestone number:MS1, MS2, ..., MSn

19. Review number

Review number: RV1, RV2, ..., RVn

20. Installation Number

Number progressively the installations of a same infrastructure. An installation is a part of an infrastructure that could be used independently from the rest.

21. Installation country

Code of the country where the installation is located or IO if the access provider (the beneficiary or linked third party) is an international organization, an ERIC or a similar legal entity.

22. Type of access

VA	if virtual access,
TA-uc	if trans-national access with access costs declared on the basis of unit cost,
TA-ac	if trans-national access with access costs declared as actual costs, and
TA-cb	if trans-national access with access costs declared as a combination of actual costs and costs on the basis of unit cost.

23. Access costs

Cost of the access provided under the project. For virtual access fill only the second column. For trans-national access fill one of the two columns or both according to the way access costs are declared. Trans-national access costs on the basis of unit cost will result from the unit cost by the quantity of access to be provided.

HORIZON2020
Call: H2020-INFRADEV-2016-1
Topic: INFRADEV-03-2016-2017
Type of action: RIA

International DEvelopment of gAnil-spirAL2

Acronym: IDEAAL
Number: 730989

History of Changes

Part A – Financial information	Modification of financial information of Partner 3 (personnel costs in average costs).
Part A – Work Packages	Modification of task 3 (Data Management) of work package 3.
Part A – Deliverables & Milestones	Modification of deliverable D2.1, addition of milestone M1, modification of milestone M2 of work package 2, addition of milestone M7 of work package 3 and addition of deliverable D5.5 of work package 5.
Part B 2.1 Expected impacts	Addition of a status of role and engagement of industry at GANIL.
Part B 3.1 Work Plan	Modification of deliverable D2.1, addition of milestone M1, modification of milestone M2 of work package 2 and addition of deliverable D5.5 of work package 5.
Part B 3.2 Management structure and procedures	Modification of "organisational structure and decision-making". Table 3.2c is removed.
Part B 4.1 Participants	Modification of GANIL and Nucléopolis descriptions and lists of key persons.
Part B 4.2 Third Parties involved in the project	Modification of GANIL description.

Table of Contents

1. Excellence

1.1 Objectives

- ***Specific objectives for the project***

The objectives of the IDEAAL Project are to explore all possibilities to develop GANIL (Grand Accélérateur National d'Ions Lourds) infrastructure, with its new SPIRAL2 facility, in order to ensure its long-term sustainability.
GANIL was funded in Caen, France in 1983 as an institute for fundamental research to investigate and consolidate knowledge about the atomic nucleus. The laboratory is operated jointly through its legal structure Groupement d'Intérêt Economique (GIE) by the National Institute of Nuclear and Particle Physics (IN2P3) belonging to the National Centre for Scientific Research (CNRS) and the Direction de la Recherche Fondamentale (DRF) of the Commissariat à l'Énergie Atomique et aux Énergies Alternatives (CEA).
The quality of beams delivered by its accelerators and state-of-the-art scientific instruments make GANIL an outstanding multi-disciplinary facility. The range of areas explored with GANIL beams from studies of the atomic nucleus, the evolution of forces between nucleons, fundamental symmetries, nuclear astrophysics, radiobiology, and materials science (ageing of materials, hardness of electronic components carried into space and nuclear reactor vessels, for example).
With SPIRAL2, GANIL will produce the only ion beams of their kind in the world to support research from hadron and isotope therapy to the physics of the atom and its nucleus, from condensed matter to astrophysics. The study of the properties of nuclei forming these beams or their interactions with stable nuclei is a rapidly developing field of contemporary nuclear physics, astrophysics and interdisciplinary research. Novel research in nuclear physics at the limits of stability will be covered, including the study of the astrophysical r and rp-process nuclei, shell closure in the vicinity magic numbers as well as the investigation of very heavy elements. New addressed research areas are related to material sciences, radiobiology, research for hadron and isotope therapy, energy, environment, social sciences, health, engineering, space, ICT as well as inter and multi-disciplinary research in radiobiology.

GANIL is itself one of the five largest laboratories in the world dedicated to research with heavy-ion beams. Several hundreds of researchers, from all over the world, come to GANIL annually for experiments, seminars, or longer stays. GANIL is one of the premiere European heavy-ion beam research institutes and contributes to the radiance of European Science.
This constant strive for excellence has led the GANIL scientific community and technical teams to develop and build a new accelerator SPIRAL2. The SPIRAL2 facility, currently under installation and commissioning in its first phase, will extend the GANIL opportunities to heavier radioactive beams, and/or with much higher intensities. SPIRAL2 has been on the ESFRI roadmap since 2006.

Additional information on the GANIL/SPIRAL2 facility is available on our website: http://www.ganil-spiral2.eu/

The SPIRAL2 facility is located on the GANIL campus and is integrated in its organisation scheme and legal status. Since January 1st, 2016, the GANIL legal status allows associated scientific partnerships with national and international collaborating institutions.

The first objective of the IDEAAL Project is to capitalize on this new legal opportunity in order to expand the GANIL membership to academic institutions, industries and private sponsors. This development goes hand-in-hand with a reinforcement of the involvement of the current institutional funding partners and academic users of GANIL facilities in the decision-making processes of the infrastructure. The available resources to operate the facility and to construct the second phase of SPIRAL2, the heart of the whole project, are presently insufficient. With additional funds and personnel, which might be provided by new partners, we expect to fully achieve the scientific objectives of the SPIRAL2 project.

The second objective of IDEAAL is to enhance the excellence of access to the infrastructure on several aspects including support to the users, access policy, assessment on cost of access to facilities and to data, improvement of performance capabilities as well as exchange and training of personnel with associated partners.

Innovation is the third objective of IDEAAL. With the new facility SPIRAL2, it is essential to convince industrial users of the reliability of this new machine and to develop new experimental tools at the existing GANIL facilities. Access provision dedicated to industrial users will greatly help to increase their interest and trust in GANIL. In parallel, new topics for technology transfer will be clearly identified. The increase of innovation potential of GANIL will also be evaluated.

These three objectives must be supported by a strong communication policy towards members and funders, users and the layman. This is the fourth objective of the Project.

Fulfilling these four objectives will allow a well-organized, highly efficient and sustainable development of the current GANIL structure, transforming existing collaborations into strong partnerships and creating new cooperation opportunities. As a consequence, IDEAAL will be the first step of the development of a true international research infrastructure GANIL, with a reinforced strategy for long-term sustainability.

1.2 Relation to the work programme

The IDEAAL Project addresses the topic INFRADEV-03-2016-2017: “Individual support to ESFRI and other world-class research infrastructures” of the Work Programme 2016-2017 4. European Research Infrastructures (including e-Infrastructures).

The IDEAAL Project aims to support the implementation and long-term sustainability of the ESFRI infrastructure SPIRAL2, within GANIL, that will start operation in the coming few years for its Phase 1. SPIRAL2 brings a new dimension to its host infrastructure GANIL, requiring the development of stronger partnerships, the optimisation of access to the infrastructure, and the enhancement of innovation and outreach policies.

Being part of GANIL, SPIRAL2 shares its existing legal status that will be the basis to build a new consortium for GANIL, of scientific members, institutional funders and private sponsors, and to provide new possibilities to users, academics and industries, in terms of support, information and involvement in the infrastructure. The new and strong international consortium should allow for a sustainable operation of the facility and for the construction of the next phases of the SPIRAL2 project.

1.3 Concept and methodology, quality of the coordination and support measures

- ***Overall concept underpinning the project***

The user community of heavy ion-beam infrastructures for nuclear physics research is currently in a transition phase between current accelerators and next-generation facilities. SPIRAL2 at GANIL is one of the most important facilities of this new generation. Indeed, as mentioned in the ESFRI strategy report in 2016, prime examples of heavy-ion beam laboratories in Europe are JYFL in Jyväskylä (Finland), FAIR/GSI in Darmstadt (Germany), GANIL in Caen (France), ALTO at IPN Orsay (France), ISOLDE at CERN (Switzerland), and the INFN laboratories in Legnaro and Catania (Italy).
This crucial change of facility generation implies an evolution of the international dimension of GANIL and of its organisation for users. IDEAAL is meant to trigger and support this decisive change.

The top priority for IDEAAL is to explore all possibilities to ensure the long-term sustainability of GANIL:

- Enlarging the GANIL membership to national and international institutions;
- Involving funding partners, users (academics and industries), and private sponsors in the decision-making process;
- Optimizing the support for the users;
- Broadening exchanges with industry.
- Enhancing communication towards current and new partners;

- ***National or international research and innovation activities which will be linked with the project***

GANIL is participating in numerous research and innovation activities at various levels.

In terms of innovation, at the regional level, GANIL is the founder of Normandie Incubation, a start-up incubator, since 2000 (http://www.normandie-incubation.com/). Today Normandie Incubation follows 50 start-ups working on very various topics from energy to health.
Between 2013 and 2015, GANIL benefited from ESIF support through FEDER projects for two new major facilities S3 and DESIR connected to the new ion accelerator SPIRAL2.

For fundamental research and applications, the French ANR (Agence Nationale de la Recherche) has also supported these two facilities for more than 17 M€, through the EQUIPEX program and collaborative projects.

At the European level, GANIL and its owner CEA-CNRS are members of NuPECC (Nuclear Physics European Collaboration Committee), which is an expert committee of the European Science Foundation.
Several collaboration agreements are presently active at GANIL, especially as virtual laboratories called "Laboratoires Internationaux Associés" (International Associated Laboratories). Such agreements have been signed between GANIL and other French laboratories and partners in Poland, the Czech Republic, Italy, Romania, India, and Japan. These agreements last for four years from the first signatures and are regularly renewed.
More specifically, a crucial agreement between France and Germany was signed in 2015 for mutual funding, for several tens of M€, of two ESFRI infrastructures: SPIRAL2 in France and FAIR in Germany.
Most of the international partners are already participating in the construction of SPIRAL2 and associated instruments but they are not yet members of the GANIL legal structure and thus they are not contributing to the operation of facility.

GANIL is currently coordinating an Integrating Activity project, ENSAR2. In this project, different actions are precisely related to GANIL development:

- A Facility Coordination Group that consists of directors and chairpersons of experimental selection committees of infrastructures providing access within ENSAR2. GANIL is part of this committee that works towards a better synergy between research infrastructures for Nuclear Physics in Europe.
- The NuPIA work package is dedicated to innovation and will develop various tools for the improvement of innovation in research infrastructures. This will include a survey on innovation, creation of a European network of SMEs and industries, communication package, and training for employees of industrial companies.
- Transnational Access to GANIL for academic users.

These actions are complementary to the actions proposed in the present IDEAAL project.

In previous EU Grants, GANIL has already worked on its development with SPIRAL2. In the SPIRAL2 Preparatory Phase (2007-2012), international collaborations developing detectors and equipment for SPIRAL2 took shape and signed several collaboration agreements and Memoranda of Understanding. These collaborations continue to be extremely active today and will take part to specific actions of the IDEAAL project. In addition, the committee created during SPIRAL2 PP for the coordination of instrumentation, continues to coordinate and emphasize synergies between these different collaborations. Legal studies performed during the SPIRAL2 PP project concluded that the best legal framework for the development of GANIL would be an ERIC (European Research Infrastructure Consortium). To the best of our knowledge, this is presently not possible for a nuclear infrastructure.
GANIL participated in the FP7 CRISP project (2011-2014), a project for the implementation of ESFRI infrastructures in Physics. During this project, scientists developed equipment and detectors for SPIRAL2.

During FP7, GANIL coordinated and participated in various Marie Curie activities, individual fellowships and training network.
In parallel, GANIL coordinated the FP7 ENSAR project (2010-2014). This integrating activity was dedicated to existing infrastructures. During this project, SPIRAL2 was still at the beginning of its final design and construction. Therefore, the SPIRAL2 facility was not included in the scope of ENSAR activities.
GANIL participates also in a FP7 EURATOM project called CHANDA, through its new experimental hall NFS at SPIRAL2.
The ACTAR TPC detector is developed to be used with SPIRAL2, thanks to an ERC Starting Grant at GANIL.

- ***Overall methodology***

The IDEAAL Project has a very solid basis with the existing GANIL facility, with an established GIE legal structure and numerous collaborations with international partners in Europe and beyond.
During the construction of the SPIRAL2 infrastructure, these collaborations were strengthened and new ones were created with new partners.

Work Package 2 of the IDEAAL Project on international coordination will use this foundation as a basis to deepen the collaborations and offer associated partnerships of GIE GANIL to countries already involved in SPIRAL2 construction and using existing GANIL infrastructure. New collaborations with industries and private sponsors will also be a priority of this strategic work package.
Excellence of access to the infrastructure will be the aim of Work Package 3 as it is crucial to optimize the support to users on technical and administrative aspects. A particular focus will also be on personnel dedicated to operating the facility as well as organisation of personnel exchanges and training with GANIL partners.
Work Package 4 will focus on relations with industries: how to convince industries to use the new SPIRAL2 infrastructure, how to enhance the knowledge transfer and to involve industrial partners in the funding scheme for new equipment, operating the facility and training (for example graduate student and PhD scholarships)
In order to increase the efficiency of Work Packages 2 through 4, Work Package 5 on communication and outreach will develop specific actions towards partners and users but also towards non-experts and the general public, which is a very important point for institutional funding.
Work Package 1 will not only deal with management of the consortium but it will also oversee the full integration of the various work packages of the Project. This latter point will be of primary importance for coordinating and supporting the project, in order to maximize the efficiency of each work package.

- ***Sex and/or gender analysis in the project***

GANIL management and communities using its ion-beam facilities take sex and/or gender issues very seriously. GANIL will ensure that gender equality means giving equal consideration to the needs and interests of both women and men. Within the IDEAAL Project, it is and will be encouraged, whenever possible, for women to participate in the tasks and in the management structure. In particular, IDEAAL has women in responsible positions as deputy coordinator and majority of work package coordinators. It is anticipated that important effort will be done by GANIL, its funding agencies CEA and CNRS as well new partners to attract women to all existing and new management structures. Furthermore, the access to infrastructures and any other equipment or code is strictly the same for all genders, within the limits of radioprotection rules. All scientists have the same work and employment conditions.

2. Impact

2.1 Expected impacts

- ***Contribution to the expected impacts***

As mentioned in the ESFRI roadmap 2010, "SPIRAL2 is a new European facility to be built at GANIL laboratory in Caen, France. The project aims at delivering stable and rare isotope beams with intensities not yet available with present machines. SPIRAL2 will reinforce the European leadership in the field of nuclear physics based on exotic nuclei."
The IDEAAL Project will explore all possibilities to secure long-term sustainability of GANIL infrastructure. In this way, it will contribute to the first expected impact, providing Europe a sustainable Research Infrastructure and helping to respond to challenges in science, through fundamental and interdisciplinary research with heavy-ion and neutron beams, in industry, via technology transfer and the use of ion beams for industrial applications, and in society, with applied research for medicine.
With SPIRAL2, the leadership of the European Research Area in the global research environment will be strengthened through the uniqueness of the beams delivered by its accelerator, the state-of-the-art scientific equipment and high-quality staff. These specific features will attract numerous scientists and industries from outside Europe with an expected increase in the number of users by a factor of two.
Industrial applications using radioactive and stable ion beams began at GANIL in 1988 with the first experiments on microporous membrane production by irradiating polymer films with heavy ions, and the first tests of electronic components to study their behaviour and resistance under irradiation. After several years of testing, companies dealing with the aerospace industry have also developed programs of component certification with the use of GANIL beams. A new sample irradiation device funded by GANIL and CNES (with the support of OSEO), including detection and control system, has been fully operational since 2010.
As consequence, the period 2011-2015 has been very active in terms of contracts with industrial users, with an average of seven to nine experiments devoted to industrial applications performed every year, corresponding to an average of 300 beam hours.
With its scientific and technological expertise, GANIL acts as a relay enhancing the transfer of its employee skills to industrial companies and their applications. In this context, GANIL applies, in conjunction with the CEA and the CNRS, a policy of industrial property, which protects its knowledge and allows transfers of applied knowledge. In the domain of ECR ion sources, GANIL inventions are protected through four patents. Three of these have been licensed to the PANTECHNIK Company, which produces and sells ion sources worldwide: NANOGAN, MONOGAN, MULTIGAN and SHEGAN are registered trademarks. Moreover, a new collaboration research agreement was signed between PANTECHNIK and GANIL at the end of 2014, for the development and testing of a prototype design for a new

multi-charged ion source. First results are very promising and final tests are expected for the end of 2016, with a high probability of a new patent. Laboratory notebooks are used to ensure the respect of industrial property.

Several accelerator technologies developed at GANIL are potentially transferable to industrial companies, and a systematic analysis of all the possibilities will start in 2016. In 2015, the patenting of a new type of aluminium flange has been launched, and the transfer of know-how and industrialisation of beam diagnostics has been started, as well.IDEAAL in itself aims to enhance the collaboration between GANIL and its current and future institutional funding partners, i.e. the European Commission, the Member States, associated countries and relevant stakeholders as local authorities, in order to closely associate them to the development of GANIL as a genuine international infrastructure.

While developing partnerships with various international institutions though this Project, GANIL will further solidify itself as a leading representative of the European community using ion beams. In this way, the role of the European Union will be enhanced in all international organisations and multilateral forums in which GANIL will participate. In particular, we can mention the Group of Senior Officials (GSO) on Global Research Infrastructures established by the G8. GSO selected a list of infrastructures for all G8 countries. For France, only GANIL, with its new accelerator SPIRAL2, is on this list. The international development of GANIL will reinforce and update the European RI policy through a dissemination of the IDEAAL project results at the NuPECC and ESFRI committee meetings and conferences.

As described above, IDEAAL will provide a global dimension to the GANIL infrastructure. This will occur through an enlargement of the partnerships to the partners from outside Europe like China, India and USA and also through a new organisation of the infrastructure in order to support every user in any type of activity that he or she will perform with GANIL, on its site or remotely, for a short visit or a long stay.

GANIL will offer new opportunities to address societal challenges, especially through its new experimental hall dedicated to very intense light-ion and neutron beams. It will attract researchers from all over the world, as evidenced by the numerous letters of intent already addressed to GANIL from the international community. This attractiveness is also a great opportunity for researchers working at GANIL, especially on applied research as development of radioisotopes production methods, for cancer diagnostics and therapy, as described in Work Package 4.

One of the IDEAAL goals is to develop a programme of scientific, technical, administrative personnel exchange and training with the GANIL associated partners, in order to take advantage of knowledge and know-how developed in the various research institutions. Particular attention will be given to collaborations with less developed regions of European Union (in Poland, Romania, and Italy). In this way, GANIL and its partners benefit from each other to best train their staff. Consequently, IDEAAL addresses perfectly the expected impact on capacity building and Research Infrastructure human capital development in several European regions.

- ***Barriers/obstacles, and framework conditions***

Today the European situation in terms of regulations and standards for the use of ion-beam infrastructures allows achieving scientific, technical, innovation and socio-economic impacts of research activities with this type of infrastructures as described in the previous section without any foreseen obstacles.

2.2 Measures to maximise impact

- ***Dissemination and exploitation of results***
  - *Draft 'plan for the dissemination and exploitation of the project's results'.*

As Coordination and Support action, IDEAAL will not directly produce scientific results. The plan for dissemination and exploitation of IDEAAL's results will concentrate on the following actions:

- Towards national and international institutional funders (e.g. ministry, regulatory authorities, regional council, national research agency): preparatory documents for negotiations with partners, creation and diffusion of a summarized annual report, creation of a local network of communication officers.
- Towards users (academics and industry): renewal of the academic user web site, creation and diffusion of a newsletter for academic users, creation and diffusion of an annual activity report of the infrastructure, annual conferences dedicated to the user community, creation of a web site dedicated to industry, creation of leaflets presenting each facility and the opportunities for industry, purchase of advertising space in specialized press.

These dissemination actions will be performed in the work package 5 (communication) in close collaboration with specific bodies that will act in work package 2 (international coordination) and work package 4 (innovation):

- Communication services of CEA and CNRS
- A User Board, with representatives from among the user community
- Nucléopolis

These bodies will play a crucial role in distributing information towards (and from) the various partners. This organisation will optimize the exchanges between GANIL staff and its partners. It will also guarantee the sustainability of these dissemination actions beyond the duration of the Project.

In parallel to actions towards partners, the IDEAAL management group will ensure the internal dissemination through regular management meetings, a newsletter and a dedicated web site. The reports of the activities that will be produced for the EC will be placed on the IDEAAL website. Any news and highlights related to GANIL will be also displayed on the IDEAAL web site.

In addition, the progress of the IDEAAL project will be discussed monthly in management meetings at GANIL, in already existing GANIL coordination meetings of the "Comité de Laboratoire" (COLAB, three times per year), of the "Comité de Direction" (CODIR, twice per year), and of the Scientific Council (twice per year).

- *How the proposed measures will help to achieve the expected impact of the project.*

The expected impact of the IDEAAL project is to convince current and future partners of GANIL to invest in its operation and development through long-term commitments. Therefore, the dissemination measures are targeted towards users who come frequently to GANIL and can persuade their own institutions to become partners of GANIL, towards institutional funders who are the historical supporters of GANIL and towards private sponsors who are not yet participating in GANIL.

- *Proportion of the plan to the scale of the project, and measures to be implemented both during and after the end of the project.*

Objectives of the IDEAAL project are to explore all possibilities to ensure the long-term sustainability of GANIL. The Project is focused mainly on international aspects. Therefore, all of the dissemination measures, except those strictly foreseen for IDEAAL management, will be continued and developed after the end of the Project. The communication team will be reinforced during the project to set up all of the basic communication tools and launch an efficient communication network.

- *Business plan*

In the framework of the IDEAAL project, a business plan is relevant in particular for industrial application activities. This will be one of the deliverables of Work Package 4.
In addition, within Work Package 2, a report will be written on cash, in-kind and like-kind exchange contributions for target partners.

- *Pilot on Open Research Data*

The beneficiaries of the IDEAAL project will not directly generate research data from this project. Therefore the IDEAAL project will not take part in the pilot on Open Research Data.

- *Open source software used or developed by the Project.*

The IDEAAL Project will not use or develop open source software.

- *Strategy for knowledge management and protection*

IDEAAL Management will implement a consortium agreement at the start of the project in order to settle questions arising from the assignment of Intellectual Property Rights (IPR).
IDEAAL partners will follow the 'green' model to provide free on-line access to the reports produced by the project in order to favour dissemination of IDEAAL results. These reports will not be published in reviews or journals. They will be free to access on the IDEAAL web site.
In addition, Task 1 of WP3 will reconsider and update the management of IPRs at GANIL, if necessary, for each step of the experiment process: proposal for experiment, its preparation and realisation, data analysis and communication of results.

- ***Communication activities***

- *Communication measures for promoting the project and its findings during the period of the grant*

As presented above, internal communication will be ensured by IDEAAL management meetings, a dedicated newsletter and website, and GANIL management and coordination meetings.

Communication towards partners (users, institutional funding partners, private sponsors) will be developed through various actions from websites to international conferences in order to maintain an intense information flux and, as a consequence, a high interest in GANIL.

Information and promotion of science and research infrastructures towards the general public are necessary to transmit the passion for science and explain the importance of research in society There is a great interest within the public for new information about research infrastructures and how they help to reveal the mysteries of nature. Non-experts often have a negative view of nuclear physics due to its association with nuclear weapons and to problems associated with nuclear waste and nuclear energy. Nuclear science and its positive application aspects performed at GANIL will be emphasised, especially applications dedicated to health, and innovations resulting from research.
In order to promote and communicate about GANIL, many activities are planned during IDEAAL in order to reach a wide audience of students and non-experts.
Actions as foreseen in Work Package 5 include:

- Exhibition on the overview of the GANIL facility with posters presenting the infrastructure, an interactive model of the facility and its equipment. There will be a travelling exhibition to be displayed at GANIL and at the sites of our partners.
- Seminars for non-experts during the Science Festivals in France and in our partner countries.
- An online virtual visit of the infrastructure to be displayed on the GANIL web site.
- Social network analysis to define GANIL digital strategy.
- Artistic partnerships (e.g. artists in residence).

Communication towards the media is also crucial for an international facility such as GANIL. Therefore, the following actions are foreseen:

- Regular relationships with local and national press, and supply these contacts with regular information.
- Creation of a press kit for GANIL
- Creation of a specific press area on the website of GANIL

These tools will also be available for our partners to better communicate about their involvement in GANIL.

3. Implementation

3.1 Work plan – Work packages and deliverables

- ***Brief presentation of the overall structure of the work plan***

The IDEAAL work plan is focused on enlarging the membership of the GANIL infrastructure, strengthening of involvement of users and funding partners and attraction of new users. These actions will boost the search of new durable sources of income for GANIL.

The work plan reflects this approach: development of implication of all persons participating in GANIL activities and evolution, improvement of quality of access to the infrastructure in the long term, and increase of innovation and industrial activities at GANIL. The communication and outreach activities aim to support each of these actions that will be developed during the IDEAAL project and continued long thereafter.

Deliverables and milestones indicate the major actions for each activity.

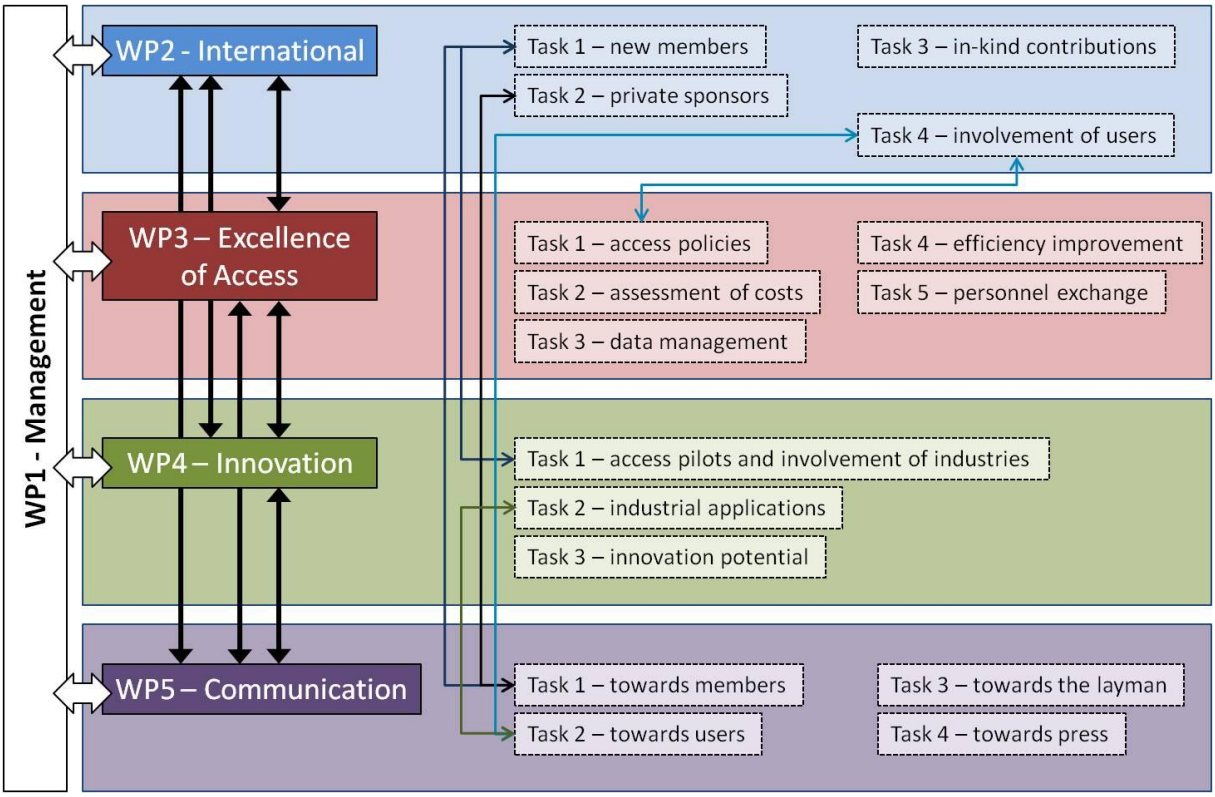
- ***Timing of the different work packages and their components***

Milestones	M
Deliverables	D

	1st year				2nd year				3rd year			
Work Package 1 - Management	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
Task 1 -Management												
Task 2 -Studies and reporting												
Task 3 -Dissemination and Exploitation of results												
D1.1: Plan for dissemination and exploitation of results		**D**										
Work Package 2 - International Coordination and New Partners	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
Task 1 -Enlargement of membership towards academics and involvement of institutional funders												
M1: Template of collaboration agreement with academic partners		**M**										
M2: Report on cash, in-kind and like-kind exchange contributions for target partners						**M**						
D2.1: Draft collaboration agreements negotiated with academic partners												**D**
Task 2 -Private sponsors and banks												
D2.2: Report on strategic and legal studies for private funding												**D**
Task 3 -In-kind contributions												
M3: Report of the already existing contributions from the partner laboratories					**M**							
D2.3: Procedure of evaluation of in-kind contributions and their monitoring								**D**				
Task 4 -Involvement of academic users– representatives of large collaborations in User Board												
M4: Kick-off meeting of the General GANIL-SPIRAL2 Collaboration				**M**								
M5: Database on research groups and equipments of GANIL-SPIRAL2						**M**						
D2.4: Report on new organisation involving users										**D**		
Work Package 3 -Excellence of Access to Infrastructure	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
Task 1 -Definition of access policies for researchers, organization of the logistic support for researchers, and management of IPRs and ethical issues												
M6: Ethical code of conduct for users						**M**						
D3.1: Access policy rules for academic and industrial users of GANIL												**D**
D3.2: Creation of a new User Office								**D**				

Task 2 -Assessment of the costs for serving the user												
D3.3: Tool for operation costs modeling according to beam time and experiments scenarios												**D**
Task 3 -Data management												
M7: Assessment of data storage needs at GANIL								**M**				
D3.4: Data Management Plan												**D**
Task 4 -How to improve efficiency: study of GANIL performance capabilities												
M8: Analysis of existing technical and administrative organisation		**M**										
D3.5: Report on the organisation of GANIL and mock audit on possibilities of ISO certification												**D**
Task 5 -Organization of personnel exchange and training												
M9: First version of mobility agreement								**M**				
D3.6: Complete mobility agreement ready for signature												**D**
Work Package 4 - Innovation and Industries	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
Task 1 - Limited pilots of access provision to research teams from industries and involvement of industrial users												
M10: Beam profile monitors: Licence contract and R&D collaboration contract with the company		**M**										
D4.1: Business plan for the industrial application activities at GANIL												**D**
Task 2 - Industrial Applications and Technology Transfer												
M11: Report on the methodology for the technology transfer for radioisotope production										**M**		
D4.2: Report on the technology transfers developed in the framework of the project												**D**
Task 3 - Increase of innovation potential												
D4.3: Report on the increase of innovation potential study												**D**
Work Package 5 -Communication and Outreach	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
Task 1 -Towards members and funding partners												
D5.1: Information tools for industrial users								**D**				
Task 2 -Towards users (academics and industries)												
D5.2: Report on annual international conferences for GANIL users												**D**
D5.3: New web site and newsletters for academic users								**D**				
Task 3-Towards the layman												
D5.4: Online and printed communication tools for dissemination of information towards the layman										**D**		
Task 4-Towards press												
D5.5: Press kit and online contents for journalists								**D**				

- *Graphical presentation of the components showing how they inter-relate*



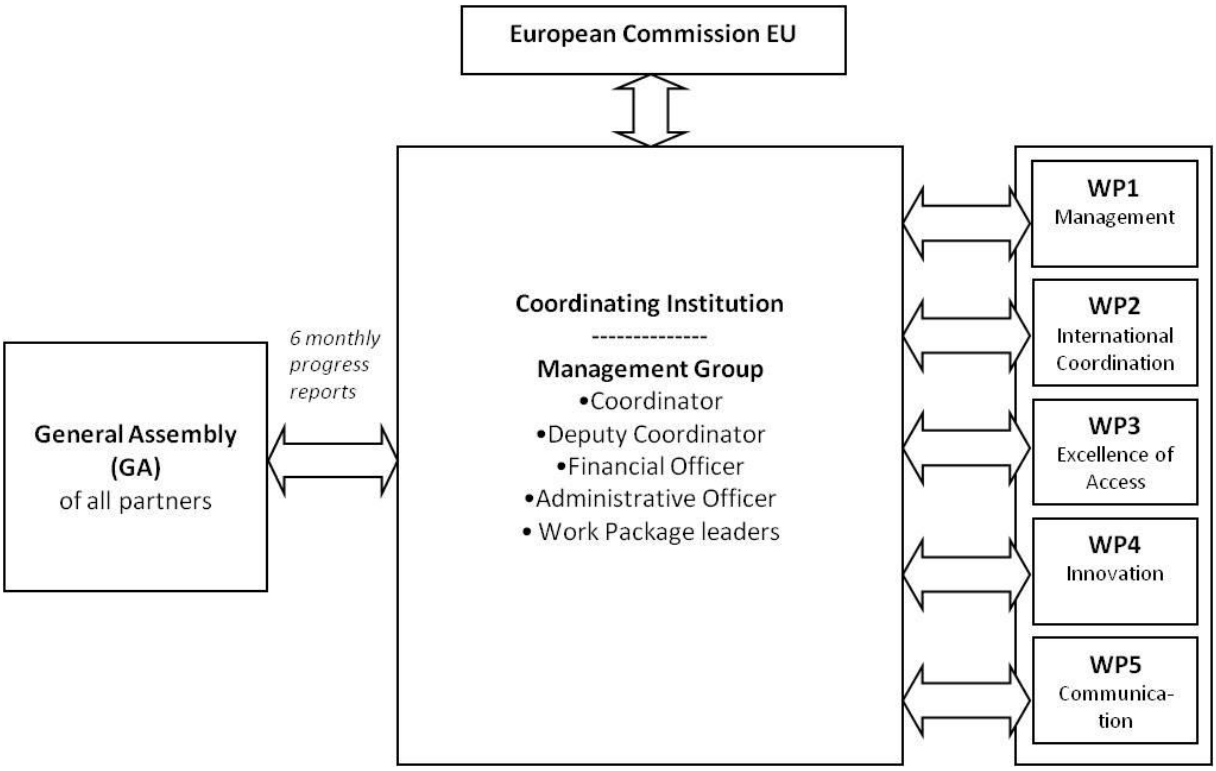
Legend: Bold arrows are for management and monitoring, thin arrows are for collaborations between work packages and tasks on specific topics.

3.2 Management structure and procedures

- *Organisational structure and decision-making*

Coordination bodies

The coordination scheme presented below describes the communication flow within the consortium, the distribution of rights and responsibilities, and contains the following elements:



- General Assembly (GA): The general assembly consists of one representative of each participating laboratory/institution. The GA will insure the feedback to the community at large and monitor the overall progress of IDEAAL. The GA (each member having one vote) approves the working plan, matters relevant to the overall budget, changes in the structure of the project (including the involvement of new partners or the withdrawal of participants), changes in the consortium agreement, and final termination of the project. The GA will elect its chairperson in the first meeting.
  Ordinary meetings are planned every six months. Extraordinary meetings can be called upon request of the coordinator, of 1/3 of the members or by any member in case of an emergency situation.

- Project Coordinator/Managing Institution: The coordinator is the sole contact person with the European Commission; this person has the full responsibility for all scientific and administrative coordination of the entire project. The chosen coordinator will be assisted by the managing institution (GANIL) and is the head of the management group.

- Management Group: To help the coordinator, the management group includes a deputy coordinator, a financial officer and an administrative assistant based at GANIL. GANIL will handle all financial transactions and accounting as well as all organisational matters related to the Project. The management group also

includes the Work Package Leaders for a close monitoring of work package progress. The Management Group will report to the General Assembly at each of its meetings.

- ***Why the organisational structure and decision-making mechanisms are appropriate to the complexity and scale of the project***

The organisational structure and decision mechanisms of IDEAAL favour the involvement of all persons of the project through their corresponding decision body. With regular meetings and daily contact with the management group, an up-to-date overview of the project progress and a rapid decision-making process will be possible.

- ***Innovation management in the management structure and work plan***

The innovation management will be performed through the dedicated work package 4 (Innovation and Industries) for the entire IDEAAL project. It was described in detail above and has as major actions: pilot access for industries, development of valorisation and innovation potential.

In WP4, GANIL will benefit from the expertise of Nucléopolis, an association for nuclear health and energy.

IDEAAL Management will implement a consortium agreement at the start of the project in order to settle questions arising from the assignment of Intellectual Property Rights (IPR) within the project. In addition, in Task 1 of WP3 (Excellence of Access), the management of Intellectual Property Rights will also be reconsidered and updated (if necessary) for each step of the experiment process: proposal for experiments, preparation and realisation of the experiment, data analysis and communication of results.

3.3 Consortium as a whole

- ***Description of the consortium***

The main objective for IDEAAL is to transform GANIL into an international infrastructure. The purpose is to ensure the long-term sustainability of GANIL. Therefore, the IDEAAL consortium is coordinated by GANIL, as most of the work packages and tasks. Indeed, most studies and developments have to be initiated at GANIL or in close collaboration with GANIL teams.

Both members of the GIE GANIL, i.e. CEA and CNRS, will play a major role in IDEAAL project. CEA and CNRS currently own GANIL with each having a 50% stake. These institutions will be particularly active in the negotiations with potential partners (WP2). In addition, they will advise the teams of WP3, WP4 and WP5, based on their experience with other international infrastructures located in France.

IFJ PAN represents the non-French user community in the IDEAAL project. From recent studies, it is clear that Polish researchers are the most frequent users and visitors to the GANIL facility over the last several years. IFJ PAN is coordinating with GANIL the *Laboratoire International Associé* COPIGAL (international associated laboratory) between France and Poland for several years. In addition, IFJ PAN is leading the Instrumentation Coordination Committee of GANIL. Consequently, IFJ PAN will coordinate the task on user involvement in WP2.

GSI (Germany) will act as the international expert in the management of the in-kind contributions to the SPIRAL2 project. In this aim, they will use their experience in negotiations with the international partners of the FAIR facility.

Nucléopolis is a longstanding collaborator with GANIL for industrial applications at the regional level. This association is specialized in nuclear science and engineering for health and energy. Nucléopolis will coordinate the task on industrial valorisation in WP4.

- ***Industrial/commercial involvement in the project to ensure exploitation of the results***

The Work Package 4 (Innovation and Industries) will be the interface between GANIL and industry within the IDEAAL project. In particular, industries will benefit from pilot access to SPIRAL2. In addition, two topics will be tested for technology transfer: beam profile monitors and production of radioisotopes.

- ***Other countries and international organisations:***

All IDEAAL beneficiaries are based in the European Union.

3.4 Resources to be committed

- ***Other direct costs (table 3.4b)***

1 - GANIL	**Cost (€)**	**Justification**
Travel & subsistence for trans-national access (if applicable)	32580	Travel and subsistence expenses for users
Other Travel	558200	Travel expenses, meetings and conferences for WP1, WP2, WP3, WP4 and WP5
Other goods and services	61300	Communication material (exhibition, brochures, reports, web site) for WP5
Total	652080	
2 - CNRS	**Cost (€)**	**Justification**
Other Travel	50000	Travel expenses for WP2
Total	50000	
3 - CEA	**Cost (€)**	**Justification**
Other Travel	100000	Travel expenses for WP2 and WP5
Total	100000	
4 - GSI	**Cost (€)**	**Justification**
Other Travel	80000	Meetings and travel expenses for WP2 – task 3
Total	80000	
5 – IFJ PAN	**Cost (€)**	**Justification**
Other Travel	142000	Kick-off collaboration meeting, working meetings and travel expenses for WP2 – task 4
Other goods and services	4000	PC computers
Total	146000	

4. Members of the consortium

4.1 Participants (applicants)

- ***GANIL***

GANIL (Grand Accélérateur National d'Ions Lourds) has been funded at Caen, France since 1983 as an institute for fundamental research to investigate and consolidate knowledge about the atomic nucleus. The laboratory is operated jointly by the National Institute of Nuclear and Particle Physics (IN2P3) belonging to the National Centre for Scientific Research (CNRS) and Direction de la Recherché Fondamentale (DRF) of the Commissariat à l'Énergie Atomique et aux Énergies Alternatives (CEA). The relation between GANIL and its third parties CNRS and CEA in the IDEAAL project, especially in matter of personnel, is further developed in section 4.2.

The quality of beams delivered by its accelerators makes GANIL an outstanding facility used also by other disciplines, via laboratories associated with CIRIL (Centre Interdisciplinaire de Recherche Ions - Lasers) and ENSI Engineer's High School in Caen, gathered in an interdisciplinary research hub. The range of areas explored with GANIL beams extends from astrophysics to radiobiology, including the science of materials (ageing of materials, hardness of electronic components carried into space and of reactor vessels, etc.). With GANIL and its industrial applications department, several specialised companies have been formed in areas ranging from the production of microporous membranes (filters) to the development of new electronic modules and ion sources. The accelerator complex of GANIL comprises Electron Cyclotron Resonance (ECR) ion sources and five cyclotrons: two injectors and two sector-separated cyclotrons put in a cascade delivering stable beams and CIME large-acceptance cyclotron for the acceleration of radioactive ion beams at the SPIRAL facility operating since 2001. Up to 3 simultaneous beams in the energy range from 1 to 100 MeV/nucleon are available. The accelerators provide for users up to 10000 hours per year of heavy-ions beams.

The SPIRAL2 facility, under construction, will extend the GANIL possibilities to heavier radioactive beams, and/or with much higher intensities: it will provide intense beams of neutron-rich exotic nuclei (106–1011 pps in the mass range 60 to 140), created by the ISOL production method. The layout of the SPIRAL2 driver is based on a superconducting linac driver, which will deliver a high-intensity, 40 MeV deuteron beam as well as a variety of heavy-ion beams with mass-to-charge ratio 3 and energy up to 14.5 MeV/nucleon. The SPIRAL2 accelerator is now under final installation, the beam commissioning should start during 2016.

GANIL pursues high-quality, front-line scientific research and actively participates in education and instruction of (graduate) students and postdocs (about 100 each year) in an international environment. GANIL has 245 full-time employees. Permanent personnel working at GANIL are employed by either CNRS or CEA and not directly by GANIL.

About 700 researchers from 30 different countries visit GANIL each year to perform experiments.

The main tasks of GANIL within IDEAAL are the coordination of WP1 – Management, WP3 – Excellence of Access to Infrastructure, WP4 – Innovation and Industries, WP5 – Communication and Outreach, and the participation in WP2 – International Coordination and New Partners.

GANIL has experience in participation in European projects in the FP3 – HORIZON2020 EC framework programmes and in coordination of European contracts (EURISOL, SPIRAL2 Preparatory Phase, ENSAR, ENSAR2). In particular, a dedicated GANIL group, "Bureau de

la Coopération Scientifique", is specialised in project management. The GANIL staff has successful experience in management of large infrastructure, large collaborations, innovation and communication.
Therefore, the facility is fully prepared to fulfil in an optimal way all tasks attributed to it in IDEAAL, including IDEAAL coordination and management.
For more information: http://www.ganil-spiral2.eu/

- *Key persons in charge of activities*

GANIL works only with personnel seconded from CNRS and CEA. These personnel are listed in section 4.2.

- *Publications*

- Search for Superscreening Effects in a Superconductor, P. Ujic, F. de Oliveira Santos, M. Lewitowicz, et al., Phys. Rev. Lett. 110, 032501 (2013)
- Status of the SPIRAL2 Project, M. Lewitowicz, Acta Phys. Pol. B42, 877 (2011)
- The SPIRAL2 Project and experiments with high-intensity rare isotope beams, M. Lewitowicz, J. Phys.: Conf. Ser. 312 052014 (2011)
- Upgrade of the SPIRAL identification station for high-precision measurements of nuclear β decay, G.F. Grinyer et al., Nucl. Instr. Meth. A 741 18-25 (2014)
- Improved half-life determination and β delayed γ-ray spectroscopy for 18Ne decay, G.F. Grinyer et al., Phys. Rev. C 87 045502 (2013)

- *Projects*

- HORIZON2020 ENSAR2 Integrating Activity (coordinator)
- FP7 SPIRAL2 Preparatory Phase (coordinator)
- FP7 ENSAR Integrating Activity (coordinator)
- FP7 CRISP cluster of research infrastructures
- FP7 ERC-StG-2013 - Active Target and Time Projection Chamber (ACTAR TPC)

- ***CNRS***

The Centre National de la Recherche Scientifique (National Centre for Scientific Research), CNRS is a government-funded research organisation, under the administrative authority of France's Ministry of Research. As the largest fundamental research organisation in Europe with an annual budget representing a quarter of French public spending on civil research, CNRS carries out research in all fields of knowledge and, in particular, in nuclear physics through one of its institutes: the National Institute of Nuclear and Particle Physics (IN2P3). IN2P3/CNRS's mission is to promote and coordinate the research activities in nuclear physics, high-energy physics and their applications. It coordinates programmes in these areas on behalf of CNRS and universities, in partnership with CEA. IN2P3/CNRS pursues front-line scientific research and participates in the education and instruction of (graduate) students and post-docs in preparing them for future careers in industry and academia. The 20 IN2P3 laboratories actively stimulate and participate in interdisciplinary fields of research, both within and outside of France. CNRS operates the state-of-the-art accelerator facilities GANIL (together with CEA/DRF) and ALTO.
CNRS has an important experience in European projects in earlier EC framework programmes and in HORIZON2020. For the IDEAAL project, CNRS experience in management of very large international infrastructures will be a great advantage for the coordination of Work Package 2 – International Coordination and New Partners.
Furthermore, each participating CNRS laboratory has several specialised services that do research in basic and applied nuclear science. The members of these groups have successful experience with running advanced accelerator facilities, management of large collaborations and are recognised experts in techniques related to exotic beam production targets and ion-source technology, innovative accelerator techniques, microelectronics, data acquisition systems including fast sampling methods, simulation and construction of large detector set-ups.

- *Key persons in charge of activities*

Role in the consortium: leader of work package 2 – International Coordination & New Partners, leader of work package 2 – task 1
Field of excellence, area of research: Nuclear physics
Name: FARGET
First Name: Fanny
Nationality: French
Gender: Female

After spending 5 years at CNRS/IPNO working on interest nuclear reactions of new generation reactors, Fanny Farget joined the GANIL's physicist group in 2003 where she studied the fusion-fission reactions and was involved in the neutrons for Science project in link with SPIRAL2. In 2014 she became responsible of the physicist group of GANIL. In December 2015 she joined CNRS/IN2P3 Direction as Scientific Vice Director.

2015 – present Scientific Vice Director at CNRS/IN2P3
2014 – 2015 Leader of Physics Group, GANIL
2013 – 2014 Sabbatical year at the University of Santiago de Compostela, Spain
2011 – 2014 Deputy leader of Physics group, GANIL
2003 – 2010 Researcher in Physics group, GANIL
2002 – 2003 Leader of PACS group at CNRS/IPNO, Orsay France

1998 – 2002 Researcher in Spallation group at CNRS/IPNO, Orsay, France
1998 Employee as *Chargée de Recherche 2^{e} classe* by CNRS
1996 – 1998 Post-Doc, GSI, Germany
1996 PhD in Nuclear Physics, ISN Grenoble, France

Role in the consortium: management of IDEAAL project for CNRS
Field of excellence, area of research: European affairs
Name: MOQUET
First Name: Natacha
Nationality: French
Gender: Female

Natacha Moquet works at CNRS IN2P3 since 2015 where she operates as European Affairs officer at the IN2P3 International Office. She is notably in charge of accompanying IN2P3 labs proposals in the frame of H2020 programme. She takes part in some coordination and support actions in the frame of the CNRS IN2P3 running projects where she brings her expertise on legal and financial aspects.

- *Publications*

- M. Caamaño, F. Farget, et al., Phys. Rev. C 92, 034606 (2015)
- M. Caamaño and F. Farget, Access to scission observables from fission fragment velocities, Physics Procedia 64 (2015) 114 – 119
- C. Rodríguez-Tajes, F. Farget, et al., Transfer reactions in inverse kinematics, an experimental approach for fission investigations, Phys. Rev. C 89 (2014) 024614
- A. Navin, et al., Towards the high spin-isospin frontier using isotopically-identified fission fragments, Phys. Lett. B 728 (2014) 136
- M. Caamaño, O. Delaune, F. Farget, et al., Isotopic Yield Distributions of Transfer- and Fusion-Induced Fission from 238U+12C Reactions in Inverse Kinematics, Phys. Rev. C 88 (2013) 02460

- *Projects*

- ENSAR2 - European Nuclear Science and Application Research 2, H2020-INFRA-IA-2015, Grant Agreement No. 654002
- AIDA 2020, INFRA-IA
- EURO CIRCLE, H2020-INFRA-DEV-RIA 2015,
- SPIRIT – Support of Public and Industrial Research using Ion Technology, FP7-Infrastructures-2008, Grant Agreement No. 227012
- FP7 SPIRAL2 Preparatory Phase

- ***CEA***

The CEA is the French Alternative Energies and Atomic Energy Commission (Commissariat à l'énergie atomique et aux énergies alternatives). It is a public body established in October 1945. A leader in research, development and innovation, the CEA mission statement has two main objectives: to become the leading technological research organization in Europe and to ensure that the nuclear deterrent remains effective in the future. In relation with the present project, CEA plays a leading role in all the major programmes in fundamental physics and with a top-level expertise in the development of instruments for this programme. Thus it has all the skills required to progress in the field of detection set-up, combining knowledge and know-how in detector physics, associated electronics and signal processing. Several CEA teams have been already involved in similar, successful programmes like Musett (silicon detector for the detection of heavy ions) or GET (General electronics for TCP) and consequently possess the expertise and the equipment to pursue a high-level research and development task in detector technology.
CEA operates GANIL infrastructure jointly with CNRS/IN2P3. Since decades, CEA participates and coordinates European projects in previous framework programmes of the European Commission and now in HORIZON2020. In addition, CEA operates numerous international infrastructures. Therefore, its experience will be precious for the coordination of Work Package 2 – International Coordination and New Partners.

- *Key persons in charge of activities*

Role in the consortium: leader of work package 2
Field of excellence, research area: Nuclear energy
Name: FAURY
First Name: Maria
Nationality: French
Gender: Female

Maria FAURY is director of international affairs and large research infrastructures, at the newly created Fundamental Research Division of CEA (French Atomic and Alternative Energy Commission).This division results from the merging of two former basic science divisions, the Physical Science division and the Life Science division. She is presently French representative in various boards such as ESRF and Soleil (European and national synchrotron), ILL (European neutron research reactor), F4E (Fusion for Energy), XFEL (European X ray free electron lasers).
She was previously deputy director of the Physical Science division and director of programs and evaluation (2014-2015).
From 2011 to 2013, Maria FAURY was Scientific Director of the sector “Energy, Sustainable Development, Chemistry and Process Engineering” at the French Ministry of Higher Education and Research. She was member of the board of French public research institutes such as IRSN (nuclear safety and radioprotection), ANDRA (nuclear waste management), IFPEN (fossile and renewable energies Institute). She was also French representative in various European bodies such as the CCEFU (Consultative Euratom Fusion Committee, the SET Plan steering committee (European Strategic Energy Technology Plan), the ESFRI Forum (European Strategic Forum on Research Infrastructures).
From 2008 to 2011, she was head of the department “Plasma Wall Interaction” at the Institute for Research in magnetic fusion, at CEA.

From 2003 to 2008 she was head of department "Experimental Research on accidents" at the French Institute Nuclear Safety and radioprotection (IRSN). From 1999 to 2008, she was project experimental project leader of the Cabri International Program, devoted to reactivity-initiated accidents.
From 1996 to 1999, she was head of a research laboratory dealing with waste decontamination at the French Atomic and Alternative Energies Commission (CEA).

Role in the consortium: leader of work package 2 – task 1 Enlargement of membership towards academics and involvement of institutional funders
Field of excellence, research area: High-energy nuclear reactions and their applications
Name: ROUSSEL-CHOMAZ
First Name: Patricia
Nationality: French
Gender: Female

Patricia Roussel-Chomaz is Manager for Large Research Infrastructures in the Fundamental Research Division of the French Alternative Energies and Atomic Energy Commission, CEA. She obtained her PhD in 1986 in nuclear physics at Paris XI University (now Paris-Sud). After a few years at CEA Saclay and Lawrence Berkeley Laboratory, she obtained in 1991 a position of physicist at GANIL. She was in charge of the high resolution magnetic spectrometer, one of the experimental equipments available for the GANIL user community. She was also Head of the Physics Group (1996-2000), scientific coordinator of the SPIRAL2 project (2007) and scientific coordinator of GANIL (2008-2010). She joined the Physical Science Division of CEA in 2010, first as Manager in charge of Programs and Evaluation and took her present position in 2012.
She is member or advisor in Councils (or equivalent governing bodies) of several national research infrastructures: GANIL, SPIRAL2, Laboratoire Léon Brillouin (LLB/Orphée reactor), and European research infrastructures: ILL, FAIR, CTA, XFEL and ESS.

- *Publications*

- D. Suzuki et al, Phys. Rev C93, 024316 (2016)
- L. Caceres et al, Phys. Rev. C92 014327 (2015)
- M. Vandebrouck et al, Phys. Rev C92, 024316 (2015)
- M. Vandebrouck, Phys. Rev. Lett. 113 , 032504 (2014)
- T. Al Kalanee, Phys. Rev C88, 034301 (2013)

- *Projects*

- Member or expert in several Councils of projects presently under construction: FAIR, XFEL, ESS
- HORIZON 2020 ENSAR2
- FP7 ENSAR
- FP7 SPIRAL2 PP
- Design of the Super Separator Spectrometer for SPIRAL2 at GANIL

- ***GSI***

GSI (GSI Helmholtzzentrum fuer Schwerionenforschung GmbH) operates a large accelerator complex consisting of the linear accelerator UNILAC, the heavy-ion synchrotron SIS and the experiment storage-cooler ring ESR. Ions of all elements, from hydrogen to uranium, can be accelerated up to energies of 1-2 A.GeV, highly ionised up to bare uranium, also secondary beams of unstable nuclei or secondary pions are available. The accelerators are complemented by technically advanced experimental facilities as well as a high-energy (kJ), high power (PW) laser system Phelix, which altogether offer outstanding opportunities for current and future research in the fields of hadron and nuclear physics, atomic physics, dense plasma research, material science, biophysics and radiation medicine.
Accelerators: The GSI accelerator complex provides ion beams of all stable elements up to uranium with energies from the Coulomb barrier up to 2 A.GeV. In addition, secondary beams of unstable nuclei are available as well as beams of highly ionised atoms up to bare uranium and beams of secondary pions. As a further option, secondary pion beams can be delivered at momenta of 0.5 GeV/c to 2.5 GeV/c. Several experiments can be performed in parallel, using different ions.
UNILAC, a 120m linear accelerator, provides intense ion beams (p to U) at energies up to 11.4 A.MeV. The UNILAC serves as an injector to the synchrotron SIS.
SIS, the heavy-ion synchrotron with 216 m circumference and a maximum bending power of 18 Tm accelerates particles of p to U up to 2 A.GeV.
FRS, a 75m Projectile Fragment Separator, provides unstable isotopes of all elements up to uranium.
In the ESR (Experimental Storage Ring), stable or radioactive ion beams can be stored and cooled at energies up to 0.56 A.GeV (for U).
The pion-beam facility provides pion-beams in the momentum range of 0.5 to 2.5 GeV/c.
Experimental facilities: GSI offers various stations for nuclear, atomic, plasma physics and material science experiments at the UNILAC and the SIS accelerators or the Experimental Storage Ring ESR of interest for the ENSAR community
• FRS – large in-flight projectile fragment separator for production and in-beam separation of nuclei far off stability
• R3B - Relativistic Radioactive Reaction Experiment to study high-lying collective states and complete kinematics break-up reactions of exotic nuclei
• SHIP spectrometer - velocity filter for separation and detection of super-heavy elements
• SHIPTRAP - Penning trap for nuclear structure and atomic physics studies on very heavy nuclei/atoms
• HITRAP - ion trap for atomic physics and nuclear structure studies on heavy, highly-charged ions at rest
• TASCA - Transactinide separator and chemistry apparatus to study single ion chemistry of super heavy ions
• In-Beam experiments at the ESR - equipped with: Schottky mass spectroscopy; time-of-flight mass spectroscopy using the isochronous operation mode of the ring; internal gas-jet target and detector system; various X-ray and position sensitive particle detectors; collinear laser spectroscopy system,
• PHELIX - high power, high energy laser for plasma physics experiments
• Two experimental stations for dense plasma research allowing the combined application of intense ion and PHELIX laser beams for plasma generation and diagnosis
• M-branch - three beam lines for materials research with in situ characterisation of irradiated samples (SEM, XRD, FTIR, UV-Vis, RGA, etc.)
• Various experimental stations for UNILAC or SIS experiments

Nature of user facility: With about 1300 users (approx. 1100 external), GSI is a user facility for the international science community.
Since the 3rd Framework Programme of the European Union, GSI has been recognised as a large scale European research infrastructure and has received EC funding respectively.
Future: GSI, together with national and international partner institutions, is planning the construction of the FAIR Facility for Antiproton and Ion Research. A superconducting double-synchrotron SIS100/300 with a circumference of about 1,100 meters and with magnetic rigidities of 100 and 300 Tm, respectively, is at the heart of the FAIR accelerator facility. Following an upgrade for high intensities, the existing GSI accelerators UNILAC and SIS18 will serve as injectors. Attached to the large double-synchrotron SIS100/300 is a complex system of storage-cooler rings and experiment stations including a superconducting nuclear fragment separator (Super FRS) and an antiproton production target. FAIR will supply radioactive ion beams and antiproton beams with unprecedented intensity and quality. Moreover, the facility is designed to provide particle energies 20-fold higher compared to those achieved so far at GSI (up to 35AGeV for U92+). A further important feature of the FAIR accelerator facility is that, due to the intrinsic cycle times of the accelerator and storage-cooler rings, up to four research programmes can be run in a truly parallel mode. This allows, in a very efficient and cost-effective way, a rich and multidisciplinary research programme to be conducted covering a broad spectrum of research fields such as: QCD studies with cooled beams of antiprotons; QCD-Matter and QCD-Phase Diagram at highest baryon density; nuclear structure and nuclear astrophysics investigations with nuclei far off stability; precision studies on fundamental interactions and symmetries; high density plasma physics; atomic and material science studies; radio-biological investigations and other application oriented studies. First operation of the FAIR facility is scheduled for 2019.
Until 2017 user operation at GSI is strongly reduced to allow for accelerator upgrades and re-building of the facility.

- *Key person in charge of activities*

Role in the consortium: leader of work package 2 – task 3 In-kind contributions
Field of excellence, research area: nuclear physics
Name: SIMON
First Name: Haik
Nationality: German
Gender: male

03/2016 – present	Subproject leader Super-FRS in the FAIR Project division
08/2012 – 03/2012	Project Division Head of the Rare Isotope Beams Division (FAIR@GSI)
08/2011 – present	Deputy Department Head of the Research Division Nuclear Reactions @ GSI
since 04/2003	Permanent staff member of GSI
08/2000 – 03/2003	PostDoc: TU Darmstadt; Germany
08/1998 – 07/2000	Scientific Associate: CERN/ISOLDE
1998	PHD in nuclear physics, Technical University of Darmstadt
1994	Diploma in nuclear physics, Technische Hochschule Darmstadt

- *Publications*

- Experimental program of the Super-FRS Collaboration at FAIR and developments of related instrumentation, Nucl. Inst. Meth. B (2016) in press.
- Exclusive measurements of quasi-free proton scattering reactions in inverse and complete kinematics, Phys. Lett. B753 (2016) 204.
- Beyond the Neutron Drip-Line, Nuclear Physics News 24 (2014) 5.
- First observation of the unbound nucleus Ne15, Phys. Rev. Lett. 112 (2014) 132502.
- Measurement of the Dipole Polarizability of the Unstable Neutron-Rich Nucleus Ni 68, Phys. Rev, Lett. 111 (2013) 242503.

- *Projects*

- HORIZON2020 ENSAR2
- FP7 FAIR Preparatory Phase
- FP7 SPIRAL2 Preparatory Phase
- FP7 ENSAR Integrating Activity

- ***IFJ PAN***

The Niewodniczanski Institute of Nuclear Physics of the Polish Academy of Sciences (Instytut Fizyki Jądrowej im. H. Niewodniczańskiego Polskiej Akademii Nauk - IFJ PAN), established in 1955, is a public research institute. The pursued research is aimed at explaining the structure of matter from microscopic to cosmic scales, through experiments and/or application of theoretical methods. The activity extends from both theoretical and experimental research, concerning the fields of particle physics and astrophysics, nuclear and strong-interactions physics, via condensed-matter physics, to interdisciplinary and applied research. The Institute has a staff of over 500 persons, including 45 full professors, 35 associate professors and around 120 post-docs. The International Post-Graduate Course at IFJ PAN has at present 50 students from universities of several countries. The Institute is pursuing an active cooperation with Polish universities which concerns research as well as education processes, and with leading institutes worldwide. Each year the Institute hosts international and national scientific conferences.
A part of the IFJ PAN is the Cyclotron Centre Bronowice (CCB), the proton-therapy and basic research facility, possessing the Proteus-235 proton cyclotron and the 60 MeV light-ion cyclotron AIC-144.
Researchers from IFJ PAN are among the most frequent users and visitors of GANIL infrastructure for several years. In addition, IFJ PAN leads two major collaborations with GANIL: the L*aboratoire International* Associé COPIGAL between France and Poland and the Instrumentation Coordination Committee of GANIL-SPIRAL2. Consequently, IFJ PAN will coordinate the task on user involvement in Work Package 2.

- *Persons in charge of activities*

Role in the consortium: leader of work package 2 – task 4 Involvement of academic users–representatives of large collaborations in User Board
Field of excellence, Research area: Experimental research on nuclear structure and reactions
Name: FORNAL
First Name: Bogdan
Nationality: Polish
Gender: male

2014 – present Head of the Division of Nuclear Physics and Strong Interactions at the Institute of Nuclear Physics PAN, Kraków, Poland
2014 Professor Title, nomination by the President of Poland
2010 – 2013 Head of the Department of the Structure of Atomic Nucleus at the Institute of Nuclear Physics PAN, Kraków, Poland
2005 – 2014 Associate Professor at the Institute of Nuclear Physics PAN, Kraków, Poland
2004 Doctor Habilitatus: Institute of Nuclear Physics, Polish Academy of Sciences, Krakow, Poland
1998, 2001, 2002 - visiting assistant professor at Purdue University, W. Lafayette, IN, USA
1991 – 1993 Post-doctoral position at Purdue University, W. Lafayette, IN, USA
1991 – 2005 Senior Research Associate at the Institute of Nuclear Physics, Krakow
1991 Ph.D.: Institute of Nuclear Physics, Kraków, Poland
1985 – 1987 Post-doctoral position at the INFN Laboratori Nazionali di Legnaro (Padova), Italy
1981 – 1991 Research Associate at the Institute of Nuclear Physics, Krakow

1981 M.Sc.: Jagiellonian University, Krakow, Poland

Role in the consortium: participation in work package 2 – task 4 Involvement of academic users– representatives of large collaborations in User Board
Field of excellence, research area: Experimental research on nuclear structure and reactions
Name: MAJ
First Name: Adam
Nationality: Polish
Gender: male

2013 – now Scientific Director of the Niewodniczanski Institute of Nuclear Physics, Kraków, Poland
2010 – 2012 Technical Director of the Niewodniczanski Institute of Nuclear Physics, Kraków, Poland
2009 – 2013 Head of the Division of Nuclear Physics and Strong Interactions at the Institute of Nuclear Physics, Kraków, Poland
2006 State nominated Professor, Warsaw, Poland
2003 – 2009 Head of the Department of the Structure of Nucleus at the Institute of Nuclear Physics, Kraków
2001 – 2006 Associated professor the Inst. of Nuclear Physics, Krakow, Poland
2001 Habilitation: Niewodniczanski Institute of Nuclear Physics, Krakow, Poland
1996 Visiting Professor in the Niels Bohr Institute, Copenhagen, Denmark
1989 – 1990 Post-doc position in the Niels Bohr Institute, Copenhagen, Denmark
1988 – 2001 Lecturer (adjunct) at the Institute of Nuclear Physics, Krakow
1988 Ph. D.: Institute of Nuclear Physics, Kraków, Poland

Role in the consortium: participation in work package 2 – task 4 Involvement of academic users– representatives of large collaborations in User Board
Field of excellence, research area: Theoretical research on nuclear structure and reactions
Name: MAZUREK
First Name: Katarzyna
Nationality: Polish
Gender: female

2014 – Habilitation: Niewodniczanski Institute of Nuclear Physics, Krakow, Poland
2013 – Specialist in Niewodniczanski Institute of Nuclear Physics, Krakow, Poland
2009-2011 Post-doc position in the Grand Accelerateur National d'Ions Lourds, Caen, France
2004 – 2013 Lecturer (adjunct) in the Niewodniczanski Institute of Nuclear Physics, Krakow, Poland
2004 - Ph. D.: University Marie Curie-Sklodowska, Lublin, Poland

- *Publications*

- V.I.Zagrebaev, B.Fornal, S.Leoni, W.Greiner, Formation of light exotic nuclei in low-energy multinucleon transfer reactions, Phys. Rev. C 89, 054608 (2014).

- S.Bottoni, S.Leoni, B.Fornal, R.Raabe et al., Cluster-transfer reactions with radioactive beams: A spectroscopic tool for neutron-rich nuclei, Phys. Rev. C 92, 024322 (2015)
- K.Mazurek, J.Dudek, A.Maj, D.Rouvel, Nuclear Jacobi and Poincare transitions at high spins and temperatures: Account of dynamic effects and large-amplitude motion, Phys.Rev. C 91, 034301 (2015)
- K.Mazurek, C.Schmitt, P.N.Nadtochy, Description of isotopic fission-fragment distributions within the Langevin approach, Phys.Rev. C 91, 041603 (2015)
- M.Ciemala, M.Kmiecik, A.Maj, K.Mazurek et al, Giant dipole resonance built on hot rotating nuclei produced during evaporation of light particles from the 88Mo compound nucleus, Phys.Rev. C 91, 054313 (2015)

- *Projects*

- HORIZON2020 ENSAR2 Integrating Activity
- FP7 SPIRAL2 Preparatory Phase
- FP7 ENSAR Integrating Activity
- FP6 NUPNET

- ***Nucléopolis***

Nucléopolis (www.nucleopolis.com) federates in Normandy the nuclear expertise of companies involved in research, training and industry across the entire value chain of nuclear science in the fields of energy and heath and in the transverse field of risk control.
Created in 2010, the cluster consists of over 75 members including renowned research and training organisations (GANIL, CEA, CNRS, ENSICAEN, Caen University, etc.), major industrial companies (AREVA, EDF, GDF-SUEZ and DCNS) and a fabric of successful SMEs. This know-how is the result of extensive experience gained in major nuclear installations such as the AREVA La Hague recycling plant, the Flamanville reactors, LSRF GANIL and tomorrow around innovating projects such as ARCHADE, SPIRAL2 and soon AREVA Med.
The work carried out by Nucléopolis is structured around three strategic objectives on behalf of companies, the nuclear industry and Normandy with the sole aim of promoting the economic development of the Norman nuclear industry, and therefore employment.

One of the main objectives of Nucléopolis is to be at the service of companies and innovation. The purpose of this objective is to make companies more competitive by supporting them in their development projects targeting new markets and in their innovation strategies. Nucléopolis proposes four types of service to member companies, either directly or subcontracted:

- network management: allow the creation of consortia for invitations to tender or collaborative projects by networking with other companies, research or training organisations.
- market itinerary: allow companies to adapt to the specific aspects of the nuclear market, help them win new markets, simplify their export formalities and their relations with contracting authorities.
- skill itinerary: consolidate the know-how of companies and provide training support for their employees.
- innovation itinerary: develop innovation capabilities by fostering new ideas and projects, by communicating the innovation capabilities of research organisations, by acting as interface with laboratories outside Normandy and by helping with the search for partners, funding, etc.

The expertise of Nucléopolis in innovation and its network of industries is important for the innovation development of GANIL. Therefore, Nucléopolis leads the task 2 of Work Package 4 – Innovation and Industries. The person in charge of this leadership will be hired before the start of the IDEAAL project, as new director of Nucléopolis.

- *Persons in charge of activities*

Role in the consortium: participation in Work Package 4 – Task 2 Industrial Valorisation
Field of excellence, research area: Health, biology, nuclear technologies (health applications: radiotherapy, radiopharmaceutics), innovation
Name: DUVAL
First name: Elise
Nationality: French

Gender: female

2012 – present: Project manager in Nucléopolis (support to SMEs towards innovation and structuring of nuclear health sector)
2009 – 2012: head of R&D studies, KELIA (pharmaceutical company), Saint Malo, France
2009: PhD in biology, University of Caen Basse-Normandie, France

- *Projects*

In France, Nucléopolis participated in the definition of the smart specialization strategy of Normandy in wich Nuclear Applications (Health application, Dismantling) has been chosen.
Localy, Nucléopolis offers services to projects of innovative SME (currently: nearly 10 projects).

4.2 Third parties involved in the project (including use of third party resources)

- ***GANIL***

Does the participant plan to subcontract certain tasks (please note that core tasks of the action should not be sub-contracted)	Y

1. In Work Package 2 (International Coordination and New Partners) – Task 2, two studies will be performed by consulting companies:
   - A study for possible strategies to attract private funding for GANIL.
   - A legal study to explore possibilities for GANIL to receive and manage private funding.

   The estimated costs are 200 000 €.
2. In Work Package 3 (Excellence of Access to the Infrastructure) – Task 4, a specialized consulting company will analyse the internal organisation of GANIL, also in the aim to get an ISO certification.
   The estimated costs are 140 000 €.
3. In Work Package 5 (Communication and Outreach) – Task 1 & Task 3:
   - A study of the best communication strategy towards industry
   - Virtual visit and videos on GANIL for general public
   - Artistic partnerships

   The estimated costs are respectively 10 000 €, 13 500 € and 4 000 €.

These studies and creation activities will require external consultants and companies since GANIL does not have these competencies.

Does the participant envisage that part of its work is performed by linked third parties	N
Does the participant envisage the use of contributions in kind provided by third parties (Articles 11 and 12 of the General Model Grant Agreement)	Y

GANIL (beneficiary n°1) will work with two Third Parties in the framework of the IDEAAL project:

These Third Parties are:

- CNRS (Centre National de Recherche Scientifique) – beneficiary n°2
- CEA (Commissariat à l'Energie Atomique et aux Energies Alternatives) – beneficiary n°3

The personnel hired by CNRS and CEA to work at GANIL in the framework of IDEAAL, are of three categories:

1. Permanent personnel, not funded by IDEAAL

Role in the consortium: coordinator of IDEAAL
Field of excellence, research area: experimental research on nuclear structure, science management
Name: LEWITOWICZ
First Name: Marek
Nationality: Polish
Gender: male

2012 – present Deputy Director of GANIL
February 2008 Promoted as Directeur de Recherche 1ère Classe at CNRS
2005 – 2011 Scientific Director of SPIRAL2
2000 – 2005 Deputy Director of GANIL
September 1997 Promoted as Directeur de Recherche 2ème Classe at CNRS
October 1991 Employee as Chargé de Recherche 1ère Classe at CNRS at GANIL
July 1989 PhD in nuclear physics

Role in the consortium: deputy coordinator of IDEAAL, leader of work package 1 - Management
Field of excellence: international cooperation
Name: TURZÓ
First Name: Ketel
Nationality: French
Gender: female

2012 – present Employee as Ingénieure de Recherche 2e classe at CNRS (GANIL), Officer of international cooperation
2008 – 2012 European Project Manager at GANIL
2006 – 2008 Scientific communication officer
2004 – 2005 Assistant professor at the University of Bordeaux, France
2003 – 2004 Post-Doc at KULeuven, Belgium
2002 PhD in nuclear physics, University of Lyon, France and GSI, Germany

Role in the consortium: leader of work package 2 – task 2: Private sponsors and banks
Field of excellence, research area: nuclear physics, science management
Name: STALEY
First Name: Florent
Nationality: French
Gender: male

2012 – present GANIL director
2010 – 2011 Assistant to the Director of Direction des Sciences de la Matière, CEA
2008 – 2010 Advisor to the French Ministry of Higher Education and Research
2000 – 2007 Head of ALICE/Dimuon spectrometer project at CERN
1997 – 2000 Head of ALICE/Dimuon spectrometer group, CEA/DAPNIA/SphN, France
1991 – 1997 Researcher at SLAC, Stanford, USA
1989 – 1991 Researcher – 10 GeV electron accelerator project
1989 PhD in Physics, University of Chambéry, France

Role in the consortium: leader of work package 3 – Excellence of Access to Infrastructure, leader of work package 3 – tasks 2 and 5
Field of excellence: administration
Name: FRANEL
First Name: Bertrand
Nationality: French
Gender: male

2016 - present Head of Administration of GANIL
2011-2015: Cost controller in charge f the large research infrastructures (CEA-Saclay)
2008-2011: Administrator of the EFDA close support unit in Garching, Gerrmany (seconded in the frame of the European Fusion Development Agreement)
1998-2007: Head of Administration of the Department of Fusion, (CEA-Cadarache)
1995-1998: Head of the audit service of the financial Directorate (CEA)
1992-1995: Responsible of the settlement of consolidated accounts of AREVA (ex CEA Industrie)
1988-1992: Auditor in Auditorship companies, from assitant to senior lever, in charge of missions in small et medium size companies mainly in industrial and services sectors
Diploma: DESCF (Diplôme d'Etudes Supérieurs Comptable et Financier)

Role in the consortium: leader of work package 3 task 1 – Definition of access policies for researchers, organization of the logistic support for researchers, and management of IPRs and ethical issues
Fields of excellence: business law
Name: JACQUET
First Name: Stéphane
Nationality: French
Gender: male

Mr Jacquet is a Doctor in Business Law and has been working for CEA (French Atomic Commission) since 1998.
He was the Head of the legal Department of CEA from 2003 to 2006.
He is the Ganil's Head of the Legal and Purchasing Department since September 2006. He is the manager of 8 people. The Ganil purchases contracted abroad represent 30% of the total of the purchases' amount. Mr Jacquet was Work Package Leader for the FP7 Project, SPIRAL2 Preparatory Phase and has experience in leading Purchasing and Legal networks concerning public funded bodies' purchases in France.

Role in the consortium: leader of work package 3 task 3 – Data management
Fields of excellence: computing
Name: MENARD
First Name: Nicolas
Nationality: French
Gender: male

2003 – present Head of Computer Service at GANIL, in charge of IT system safety for CNRS-IN2P3, and system administrator
2013 – present senior lecturer at University Institute of Technology, Caen, France
2001 Master in computer engineering and IT integration, CNAM, Caen, France
1998 – 2003 Applications manager, teaching hospital of Caen, France
1997 Analyst-programmer, ICOB, Caen
1997 Computing diploma in software engineering, Paris, France
1995 – 1997 Analyst-programmer, VOBIS Microcomputer AG, Paris, France

Role in the consortium: leader of work package 3 task 4 – How to improve efficiency
Fields of excellence: management, quality, accelerators
Name: SENECAL
First Name: Gilles
Nationality: French
Gender: male

2012 – present Deputy Director in charge of Technical Coordination and Quality at GANIL
2005 – 2012: Head of the Accelerators Department at GANIL
2002 – 2005: Deputy Head of the Accelerators Department at GANIL
2000 – 2002: Head of the Power Supplies Group at GANIL
1990 – 2000: Engineer in the Power Supplies Group at GANIL
1989: Engineering degree in instrumentation of the Ecole Nationale Supérieure d'Ingénieurs de CAEN

Role in the consortium: leader of work package 4 – Innovation and Industries, leader of work package 4 – tasks 1 and 3
Field of excellence, research area: innovation, accelerator research
Name: MOSCATELLO
First Name: Marie-Hélène
Nationality: French
Gender: female

2015 – present Officer in charge of innovation, industrial applications with beams and relations with industry
2012 – 2015 GANIL Vice-Director in charge of safety-security-radioprotection-environment
2010 – 2012 Responsible for Technical Audits of the SPIRAL2 project (50%)
Responsible for the Machine Protection System of the SPIRAL2 facility (50%)
2009 – 2010 Accelerator Project leader for the ARCHADE hadron-therapy centre in Caen, France
2005 – 2009 Interim Project leader of the SPIRAL2 project, from January to July 2005
Responsible for the Radioactive Beam Production and Acceleration of the SPIRAL2 project
2001 – 2004 Responsible of GANIL Accelerator Development Group
1998 – 2000 Head of the Operation of the GANIL accelerators

1992 – 1998 Head of the "Theory and Parameters" Group in the Accelerator Division
1991 – 1992 Design of the central region of the superconducting cyclotron K800, Catania, Italy
1989 – 1991 Cyclotron studies – Design of the injection and extraction systems of a separated-sector superconducting cyclotron
1989 – present Engineer, Commissariat à l'Énergie Atomique et aux Énergies Alternatives (CEA), GANIL, France
1987 – 1989 Nuclear engineer – Design of nuclear fuel reloads for nuclear plants, Västerås, Sweden
1985 – 1987 Nuclear engineer in the nuclear fuel reprocessing plant in La Hague, France
July 1985 Engineering Diploma (M.Sc.) at PHELMA-Grenoble INP in Energy and Nuclear Engineering

2. Temporary personnel – identified – Myriam Grar:

Role in the consortium: leader of work package 5 – Communication and Outreach
Main scientific activity: Communication strategy and tools
Name: GRAR
First Name: Myriam
Nationality: French
Gender: female

Myriam Grar has a Masters degree in Communication and Media from ISCOM Lyon (France).
From 2011 to 2015, Myriam Grar worked as a project manager in a communication agency in Lyon. She set up communication strategies and tools for public bodies and private clients, mainly in cultural, technical and scientific fields.
In 2015, she joined GANIL as the communication officer of the laboratory. As such, she set up the communication strategy for the laboratory: definition of the communication goals, audiences, key messages and tools. The tools she implements aim general public, institutional and private partners, users and media. She writes and creates numerous communication tools (websites, leaflets, posters, exhibitions, reports…) while adapting the message to each audience. She closely works with partners to diffuse news about GANIL to its different audiences. She takes part of the local organizing committees for workshops, conferences and seminars organized by GANIL.

3. Additional temporary personnel to be hired:

Work Package 3 – estimated personnel budget: 355 000 euros

- A finance assistant: Master level, no professional experience necessary.
- A technician specialized in fluid (electricity, etc) management: Bachelor level, 1-2 years of professional experience.
- A computer engineer: Master level, 3-5 years of professional experience.
- A quality engineer: Bachelor level, no professional experience necessary.
- An assistant specialized in human resources administration: Master level, 3-5 years of professional experience.

Work Package 4 – estimated personnel budget: 127 800 euros

- Two officers: Master level (minimum) having performed their Master work in relationship with technology transfer or valorisation of scientific activities.

Work Package 5 – estimated personnel budget: 194 600 euros (including Myriam Grar's salary)

- A web designer: Master level, 3-5 years of professional experience.
- A computer graphics designer: Bachelor level, 3-5 years of professional experience.

In GANIL, CNRS personnel and CEA personnel work both under GANIL's control and at GANIL premises. The personnel seconded to GANIL are paid by CNRS and CEA. The costs related to CNRS and CEA seconded personnel are refunded on a yearly basis by GANIL to CNRS and CEA.

GANIL's third parties (CNRS and CEA) will make resources available against payment according to article 11 of the Grant Agreement.

The other participants CNRS, CEA, GSI, IFJ PAN and Nucléopolis do not have any third party in the framework of the IDEAAL project.

5. Ethics and security

5.1 Ethics

The IDEAAL project is dedicated to coordination and support actions. Therefore it does not present ethic issues.
During the IDEAAL project, the IDEAAL consortium will rigorously apply the ethical standards and guidelines of Horizon2020 regardless of the participating country.

5.2 Security[1]

Please indicate if your project will involve:

- activities or results raising security issues: NO
- 'EU-classified information' as background or results: NO

[1] Article 37.1 of the Model Grant Agreement: *Before disclosing results of activities raising security issues to a third party (including affiliated entities), a beneficiary must inform the coordinator — which must request written approval from the Commission/Agency.* Article 37.2: *Activities related to 'classified deliverables' must comply with the 'security requirements' until they are declassified. Action tasks related to classified deliverables may not be subcontracted without prior explicit written approval from the Commission/Agency. The beneficiaries must inform the coordinator — which must immediately inform the Commission/Agency — of any changes in the security context and — if necessary —request for Annex 1 to be amended (see Article 55*

ESTIMATED BUDGET FOR THE ACTION (page 1 of 2)

	Estimated eligible[1] costs (per budget category)										EU contribution			Additional information		
	A. Direct personnel costs				B. Direct costs of subcontracting	C. Direct costs of fin. support	D. Other direct costs	E. Indirect costs[2]	F. Special unit costs	Total costs	Reimbursement rate %	Maximum EU contribution[3]	Maximum grant amount[4]	Information for indirect costs	Information for auditors	Other information:
	A.1 Employees (or equivalent) A.2 Natural persons under direct contract A.3 Seconded persons [A.6 Personnel for providing access to research infrastructure]		A.4 SME owners without salary A.5 Beneficiaries that are natural persons without salary				D.1 Travel D.2 Equipment D.3 Other goods and services D.4 Costs of large research infrastructure		F. 1 "Costs for providing trans-national access to research infrastructure" **					Estimated costs of in-kind contributions not used on premises	Declaration of costs under Point D.4	Estimated costs of beneficiaries/ linked third parties not receiving EU funding
Form of costs[6]	Actual	Unit[7]	Unit[8]		Actual	Actual	Actual	Flat-rate[9] 25%								
	(a)	Total (b)	No hours	Total (c)	(d)	(e)	(f)	(g)=0,25x ((a)+(b)+ (c)+(f) +[(h1)+(h2)]- (m))	Total (h1)	(i)= (a)+(b)+(c)+ (d)+(e)+(f)+ (g)+(h1)+(h2)+(h3)	(j)	(k)	(l)	(m)	Yes/No	
1. GANIL	677400.00	0.00	0	0.00	367500.00	0.00	652080.00	332370.00	224640.00	2253990.00	100.00	2253990.00	2253990.00	0.00	No	
2. CNRS	136220.00	0.00	0	0.00	0.00	0.00	50000.00	46555.00		232775.00	100.00	232775.00	232775.00	0.00	No	
3. CEA	0.00	233300.00	0	0.00	0.00	0.00	100000.00	83325.00		416625.00	100.00	416625.00	416625.00	0.00	No	
4. GSI	300000.00	0.00	0	0.00	0.00	0.00	80000.00	95000.00		475000.00	100.00	475000.00	475000.00	0.00	No	
5. IFJ PAN	80000.00	0.00	0	0.00	0.00	0.00	146000.00	56500.00		282500.00	100.00	282500.00	282500.00	0.00	No	
6. Nucleopolis	160000.00	0.00	0	0.00	0.00	0.00	18000.00	44500.00		222500.00	100.00	222500.00	222500.00	0.00	No	
Total consortium	1353620.00	233300.00			367500.00	0.00	1046080.00	658250.00	224640.00	3883390.00		3883390.00	3883390.00	0.00		0.00

ESTIMATED BUDGET FOR THE ACTION (page 2 of 2)

(1) See Article 6 for the eligibility conditions
(2) The indirect costs covered by the operating grant (received under any EU or Euratom funding programme; see Article 6.5.(b)) are ineligible under the GA. Therefore, a beneficiary that receives an operating grant during the action's duration cannot declare indirect costs for the year(s)/reporting period(s) covered by the operating grant (see Article 6.2.E).
(3) This is the theoretical amount of EU contribution that the system calculates automatically (by multiplying all the budgeted costs by the reimbursement rate). This theoretical amount is capped by the 'maximum grant amount' (that the Commission/Agency decided to grant for the action) (see Article 5.1).
(4) The 'maximum grant amount' is the maximum grant amount decided by the Commission/Agency. It normally corresponds to the requested grant, but may be lower.
(5) Depending on its type, this specific cost category will or will not cover indirect costs. Specific unit costs that include indirect costs are: costs for energy efficiency measures in buildings, access costs for providing trans-national access to research infrastructure and costs for clinical studies.
(6) See Article 5 for the forms of costs
(7) Unit : hours worked on the action; costs per unit (hourly rate) : calculated according to beneficiary's usual accounting practice
(8) See Annex 2a 'Additional information on the estimated budget' for the details (costs per hour (hourly rate)).
(9) Flat rate : 25% of eligible direct costs, from which are excluded: direct costs of subcontracting, costs of in-kind contributions not used on premises, direct costs of financial support, and unit costs declared under budget category F if they include indirect costs
(10) See Annex 2a 'Additional information on the estimated budget' for the details (units, costs per unit).
(11) See Annex 2a 'Additional information on the estimated budget' for the details (units, costs per unit, estimated number of units, etc)
(12) Only specific unit costs that do not include indirect costs
(13) See Article 9 for beneficiaries not receiving EU funding
(14) Only for linked third parties that receive EU funding

ANNEX 2a

ADDITIONAL INFORMATION ON THE ESTIMATED BUDGET

Research infrastructure unit cost

Access costs for providing trans-national access to research infrastructure

Units[1]: see (for each access provider and installation) the 'unit cost table' attached

Amount per unit*: see (for each access provider and installation) the 'unit cost table' attached

* Amount calculated as follows:

$$\frac{\text{average annual total access cost to the installation (over past two years}^{2})}{\text{average annual total quantity of access to the installation (over past two years}^{3})}$$

Estimated number of units: see (for each access provider and installation) the 'unit cost table' attached

Unit cost table (access to research infrastructure unit cost)[4]

Short name access provider	Short name infrastructure	Installation		Unit of access	Amount per unit	Estimated No of units	Total unit cost (cost per unit x estimated no of units)
		No	Short name				
GANIL	GANIL	1	GANIL	Beam hour	936.00	240	224640.00

Calculation of the unit costs and actual costs for Trans-national Access for providing trans-national access to research infrastructure

The detailed calculation of the unit costs and actual costs are presented in the following pages.

1 Unit of access (e.g. beam hours, weeks of access, sample analysis) fixed by the access provider in proposal.
2 In exceptional and duly justified cases, the Commission/Agency may agree to a different reference period.
3 In exceptional and duly justified cases, the Commission/Agency may agree to a different reference period.
4 Data will be taken from the 'table on estimated costs/quantity of access to be provided' that is part of the proposal and Annex 1.

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE CNRS (CNRS), 180089013, established in RUE MICHEL ANGE 3, PARIS 75794, France, VAT number FR40180089013, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

hereby agrees

to become beneficiary No ('2')

in Grant Agreement No 730989 ('the Agreement')

between GRAND ACCELERATEUR NATIONAL D'IONS LOURDS **and** the European Union ('the EU'), represented by the European Commission ('the Commission'),

for the action entitled 'International Development of gAnil-spirAL2 (IDEAAL)'.

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

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 conditions it sets out.

SIGNATURE

For the beneficiary

Reynald PAIN with ECAS id npainrey signed in the Participant Portal on 22/12/2016 at 12:01:27 (transaction id SigId-34726-Wrxdd0rayeFXMzzT0qiousqd0vMToRwKEES3COEuzsiyslH9tzu9Rh75SJRbypm9l1FFzjIhRwO5Dh2VvIOJr2m-PHslUMVSXYCMc6XrQfmgmu-mF4WRKo8QYmXyEzohFBfrGzhpHKQ5n1xzuENgoYmERQm).
Timestamp by third party at
Thu Dec 22 12:01:35 CET 2016

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES (CEA) EPIC, 775685019, established in RUE LEBLANC 25, PARIS 15 75015, France, VAT number FR43775685019, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

hereby agrees

to become beneficiary No ('3')

in Grant Agreement No 730989 ('the Agreement')

between GRAND ACCELERATEUR NATIONAL D'IONS LOURDS **and** the European Union ('the EU'), represented by the European Commission ('the Commission'),

for the action entitled 'International Development of gAnil-spirAL2 (IDEAAL)'.

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

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 conditions it sets out.

SIGNATURE

For the beneficiary

Gaelle DECROIX with ECAS id ndecroga signed in the Participant Portal on 16/12/2016 at 16:59:27 (transaction id SigId-150737-TasJASwqZjTqL9F1e4DTAoSyflmy3Nw0TjcmftKMZgY90mVRtr1lOoiKDpI7w0M3byrvgzzcFMWJVzqzpUVUu80-Jj71zxYb8yryEnwGPo6Oly-k3SYpl9mien8E4JjC7u0QqgHBL8JjJRZgPqspMMzKvD). Timestamp by third party at Fri Dec 16 16:59:37 CET 2016

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

GSI HELMHOLTZZENTRUM FUER SCHWERIONENFORSCHUNG Gmbh (GSI) GMBH, HRB1528, established in PLANCKSTRASSE 1, DARMSTADT 64291, Germany, VAT number DE111671917, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

hereby agrees

to become beneficiary No ('4')

in Grant Agreement No 730989 ('the Agreement')

between GRAND ACCELERATEUR NATIONAL D'IONS LOURDS **and** the European Union ('the EU'), represented by the European Commission ('the Commission'),

for the action entitled 'International Development of gAnil-spirAL2 (IDEAAL)'.

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

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 conditions it sets out.

SIGNATURE

For the beneficiary

Franz FORSTER with ECAS id nfofranz signed in the Participant Portal on 16/12/2016 at 10:31:13 (transaction id SigId-136018-HXZSfNs0q7NyBfQk38Hml1x8qzvAi0Q9ZXRd01EZuxRHC0kVJjzd4Aghx7Uv37g4UCtuSjdjDSzOC5zwzL2okqs-Jj71zxYb8yryEnwGPo6Oly-QptmzpSCLUhrXmLotm6k8aKg7vrwXjcZ38zVwzY1hPM4).
Timestamp by third party at
Fri Dec 16 10:31:25 CET 2016

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

THE HENRYK NIEWODNICZANSKI INSTITUTE OF NUCLEAR PHYSICS, POLISH ACADEMY OF SCIENCES (IFJ PAN), established in RADZIKOWSKIEGO 152, KRAKOW 31 342, Poland, VAT number PL6750000444, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

hereby agrees

to become beneficiary No ('5')

in Grant Agreement No 730989 ('the Agreement')

between GRAND ACCELERATEUR NATIONAL D'IONS LOURDS **and** the European Union ('the EU'), represented by the European Commission ('the Commission'),

for the action entitled 'International Development of gAnil-spirAL2 (IDEAAL)'.

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

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 conditions it sets out.

SIGNATURE

For the beneficiary

Marek JEZABEK with ECAS id njezabma signed in the Participant Portal on 15/12/2016 at 11:41:03 (transaction id SigId-116872-5wRsli20xRtcLnyAQcES4BDjZ5zGphJkG7XzzrQRomNIAmRUE8VSruN6diH2VRP1JXMgt08AsEWT4gatSAOIc8W-Jj71zxYb8yryEnwGPo6Oly-UH4nDZ3zXQknFuxF9e4SJc2iBK1pzYOmVm2YmNOazYaO).
Timestamp by third party at
Thu Dec 15 11:41:13 CET 2016

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

NUCLEOPOLIS POLE NORMAND DES SCIENCES NUCLEAIRES ET DE LEURS APPLICATIONS (Nucleopolis) FR20, 527614416, established in 2 PLACE ANTON PHILIPPS, COLOMBELLES 14460, France, VAT number FR73527614416, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

hereby agrees

to become beneficiary No ('6')

in Grant Agreement No 730989 ('the Agreement')

between GRAND ACCELERATEUR NATIONAL D'IONS LOURDS **and** the European Union ('the EU'), represented by the European Commission ('the Commission'),

for the action entitled 'International Development of gAnil-spirAL2 (IDEAAL)'.

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

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 conditions it sets out.

SIGNATURE

For the beneficiary

Serge BOUFFARD with ECAS id nbressst signed in the Participant Portal on 12/01/2017 at 22:53:37 (transaction id SigId-457-ahlvjizOyA04LhS0zvV0EeNvqL7gXF5kYkPL4hef2ocwGpY2n7nWHiNHjXHQsSYSooXXgB7x4kerFzoHHx7UayW-PHslUMVSXYCuQzl8qShu1D-sB3d7ZHXzj60WLkqPKRIu20Ou0fdNIupRpnZUkAremx). Timestamp by third party at
Thu Jan 12 22:53:45 CET 2017

ⓘ print format A4 landscape

MODEL ANNEX 4 FOR H2020 GENERAL MGA — MULTI

FINANCIAL STATEMENT FOR *[BENEFICIARY [name]/ LINKED THIRD PARTY [name]]* FOR REPORTING PERIOD [reporting period]

	Eligible[1] costs (per budget category)												Receipts	EU contribution			Additional information
	A. Direct personnel costs				B. Direct costs of subcontracting	*[C. Direct costs of fin. support]*	D. Other direct costs		E. Indirect costs[2]	*[F. Costs of …]*		Total costs	Receipts	Reimbursement rate %	Maximum EU contribution[3]	Requested EU contribution	Information for indirect costs :
	A.1 Employees (or equivalent) A.2 Natural persons under direct contract A.3 Seconded persons *[A.6 Personnel for providing access*		A.4 SME owners without salary A.5 Beneficiaries that are natural persons without salary			*[C.1 Financial support]* *[C.2 Prizes]*	D.1 Travel D.2 Equipment D.3 Other goods and	*[D.4 Costs of large research infrastructure]*		*[F.1 Costs of …]*	*[F.1 Costs of …]*		Receipts of the action, to be reported in the last reporting period, according to Article 5.3.3				Costs of in-kind contributions not used on premises
Form of costs[4]	Actual	Unit	Unit		Actual	Actual	Actual	Actual	Flat-rate[5] 25%	*[Unit][Lump sum]*	Unit						
	a	Total b	No hours	Total c	d	*[e]*	f	*[g]*	(a+b+c+f+[g]+ n=0,25 x	No units	Total *[i1]* Total *[i2]*	a+b+c+d+[e]+f+[g]+	k	l	m	n	o
[short name beneficiary /linked third party]																	

The beneficiary/linked third party hereby confirms that:
The information provided is complete, reliable and true.
The costs declared are eligible (see Article 6).
The costs 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 17, 18 and 22).
For the last reporting period: that all the receipts have been declared (see Article 5.3.3).

ⓘ Please declare all eligible costs, even if they exceed the amounts indicated in the estimated budget (see Annex 2). Only amounts that were declared in your individual financial statements can be taken into account lateron, in order to replace other costs that are found to be ineligible.

[1] See Article 6 for the eligibility conditions

[2] The indirect costs claimed must be free of any amounts covered by an operating grant (received under any EU or Euratom funding programme; see Article 6.2.E). If you have received an operating grant during this reporting period, you cannot claim any indirect costs.

[3] This is the *theoretical* amount of EU contribution that the system calculates automatically (by multiplying the reimbursement rate by the total costs declared). The amount you request (in the column 'requested EU contribution') may be less

[4] See Article 5 for the form of costs

[5] Flat rate : 25% of eligible direct costs, from which are excluded: direct costs of subcontracting, costs of in-kind contributions not used on premises, direct costs of financial support, and unit costs declared under budget category F if they include indirect costs (see Article 6.2.E)

[6] Only specific unit costs that do not include indirect costs

ANNEX 5

MODEL FOR THE CERTIFICATE ON THE FINANCIAL STATEMENTS

- **For options [*in italics in square brackets*]: choose the applicable option. Options not chosen should be deleted.**
- **For fields in [grey in square brackets]: enter the appropriate data**

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Terms of Reference for an Independent Report of Factual Findings on costs declared under a Grant Agreement financed under the Horizon 2020 Research and Innovation Framework Programme

This document sets out the '**Terms of Reference (ToR)**' under which

[OPTION 1: [insert name of the beneficiary] ('the Beneficiary')] [OPTION 2: [insert name of the linked third party] ('the Linked Third Party'), third party linked to the Beneficiary [insert name of the beneficiary] ('the Beneficiary')]

agrees to engage

[**insert legal name of the auditor**] ('the Auditor')

to produce an independent report of factual findings ('the Report') concerning the Financial Statement(s)[1] drawn up by the *[Beneficiary] [Linked Third Party]* for the Horizon 2020 grant agreement [insert number of the grant agreement, title of the action, acronym and duration from/to] ('the Agreement'), and

to issue a Certificate on the Financial Statements' ('CFS') referred to in Article 20.4 of the Agreement based on the compulsory reporting template stipulated by the Commission.

The Agreement has been concluded under the Horizon 2020 Research and Innovation Framework Programme (H2020) between the Beneficiary and *[OPTION 1: the European Union, represented by the European Commission ('the Commission')][OPTION 2: the European Atomic Energy Community (Euratom,) represented by the European Commission ('the Commission')][OPTION 3: the [Research Executive Agency (REA)] [European Research Council Executive Agency (ERCEA)] [Innovation and Networks Executive Agency (INEA)] [Executive Agency for Small and Medium-sized Enterprises (EASME)] ('the Agency'), under the powers delegated by the European Commission ('the Commission').]*

The *[Commission] [Agency]* is mentioned as a signatory of the Agreement with the Beneficiary only. The *[European Union][Euratom][Agency]* is not a party to this engagement.

1.1 Subject of the engagement

The coordinator must submit to the *[Commission][Agency]* the final report within 60 days following the end of the last reporting period which should include, amongst other documents, a CFS for each beneficiary and for each linked third party that requests a total contribution of EUR 325 000 or more, as reimbursement of actual costs and unit costs calculated on the basis of its usual cost accounting practices (see Article 20.4 of the Agreement). The CFS must cover all reporting periods of the beneficiary or linked third party indicated above.

The Beneficiary must submit to the coordinator the CFS for itself and for its linked third party(ies), if the CFS must be included in the final report according to Article 20.4 of the Agreement..

The CFS is composed of two separate documents:

- The Terms of Reference ('the ToR') to be signed by the *[Beneficiary] [Linked Third Party]* and the Auditor;

[1] By which costs under the Agreement are declared (see template 'Model Financial Statements' in Annex 4 to the Grant Agreement).

- The Auditor's Independent Report of Factual Findings ('the Report') to be issued on the Auditor's letterhead, dated, stamped and signed by the Auditor (or the competent public officer) which includes the agreed-upon procedures ('the Procedures') to be performed by the Auditor, and the standard factual findings ('the Findings') to be confirmed by the Auditor.

If the CFS must be included in the final report according to Article 20.4 of the Agreement, the request for payment of the balance relating to the Agreement cannot be made without the CFS. However, the payment for reimbursement of costs covered by the CFS does not preclude the *[Commission,][Agency,]* the European Anti-Fraud Office and the European Court of Auditors from carrying out checks, reviews, audits and investigations in accordance with Article 22 of the Agreement.

1.2 Responsibilities

The *[Beneficiary] [Linked Third Party]:*

- must draw up the Financial Statement(s) for the action financed by the Agreement in compliance with the obligations under the Agreement. The Financial Statement(s) must be drawn up according to the *[Beneficiary's] [Linked Third Party's]* accounting and book-keeping system and the underlying accounts and records;
- must send the Financial Statement(s) to the Auditor;
- is responsible and liable for the accuracy of the Financial Statement(s);
- is responsible for the completeness and accuracy of the information provided to enable the Auditor to carry out the Procedures. It must provide the Auditor with a written representation letter supporting these statements. The written representation letter must state the period covered by the statements and must be dated;
- accepts that the Auditor cannot carry out the Procedures unless it is given full access to the *[Beneficiary's] [Linked Third Party's]* staff and accounting as well as any other relevant records and documentation.

The Auditor:

- *[Option 1 by default:* is qualified to carry out statutory audits of accounting documents in accordance with 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, amending Council Directives 78/660/EEC and 83/349/EEC and repealing Council Directive 84/253/EEC or similar national regulations*]*.
- *[Option 2 if the Beneficiary or Linked Third Party has an independent Public Officer:* is a competent and independent Public Officer for which the relevant national authorities have established the legal capacity to audit the Beneficiary*]*.
- *[Option 3 if the Beneficiary or Linked Third Party is an international organisation:* is an [internal] [external] auditor in accordance with the internal financial regulations and procedures of the international organisation*]*.

The Auditor:

- must be independent from the Beneficiary *[and the Linked Third Party]*, in particular, it must not have been involved in preparing the *[Beneficiary's] [Linked Third Party's]* Financial Statement(s);
- must plan work so that the Procedures may be carried out and the Findings may be assessed;
- must adhere to the Procedures laid down and the compulsory report format;
- must carry out the engagement in accordance with this ToR;
- must document matters which are important to support the Report;
- must base its Report on the evidence gathered;
- must submit the Report to the *[Beneficiary] [Linked Third Party]*.

The Commission sets out the Procedures to be carried out by the Auditor. The Auditor is not responsible for their suitability or pertinence. As this engagement is not an assurance engagement, the Auditor does not provide an audit opinion or a statement of assurance.

1.3 Applicable Standards

The Auditor must comply with these Terms of Reference and with[2]:

- the International Standard on Related Services ('ISRS') 4400 *Engagements to perform Agreed-upon Procedures regarding Financial Information* as issued by the International Auditing and Assurance Standards Board (IAASB);
- the *Code of Ethics for Professional Accountants* issued by the International Ethics Standards Board for Accountants (IESBA). Although ISRS 4400 states that independence is not a requirement for engagements to carry out agreed-upon procedures, the *[Commission][Agency]* requires that the Auditor also complies with the Code's independence requirements.

The Auditor's Report must state that there is no conflict of interests in establishing this Report between the Auditor and the Beneficiary *[and the Linked Third Party]*, and must specify - if the service is invoiced - the total fee paid to the Auditor for providing the Report.

1.4 Reporting

The Report must be written in the language of the Agreement (see Article 20.7).

Under Article 22 of the Agreement, the Commission*[, the Agency]*, the European Anti-Fraud Office and the Court of Auditors have the right to audit any work that is carried out under the action and for which costs are declared from [*the European Union*] [*Euratom*] budget. This includes work related to this engagement. The Auditor must provide access to all working papers (e.g. recalculation of hourly rates, verification of the time declared for the action) related to this assignment if the Commission *[, the Agency]*, the European Anti-Fraud Office or the European Court of Auditors requests them.

1.5 Timing

The Report must be provided by *[*dd Month yyyy*]*.

1.6 Other terms

[*The [Beneficiary] [Linked Third Party] and the Auditor can use this section to agree other specific terms, such as the Auditor's fees, liability, applicable law, etc. Those specific terms must not contradict the terms specified above.*]

[legal name of the Auditor]	[legal name of the *[Beneficiary][Linked Third Party]*]
[name & function of authorised representative]	[name & function of authorised representative]
[dd Month yyyy]	[dd Month yyyy]
Signature of the Auditor	Signature of the *[Beneficiary][Linked Third Party]*

[2] Supreme Audit Institutions applying INTOSAI-standards may carry out the Procedures according to the corresponding International Standards of Supreme Audit Institutions and code of ethics issued by INTOSAI instead of the International Standard on Related Services ('ISRS') 4400 and the Code of Ethics for Professional Accountants issued by the IAASB and the IESBA.

Independent Report of Factual Findings on costs declared under Horizon 2020 Research and Innovation Framework Programme

(To be printed on the Auditor's letterhead)

To
[name of contact person(s)], [Position]
[[*Beneficiary's*] [*Linked Third Party's*] name]
[Address]
[dd Month yyyy]

Dear [Name of contact person(s)],

As agreed under the terms of reference dated [dd Month yyyy]

with *[OPTION 1: [insert name of the beneficiary] ('the Beneficiary')] [OPTION 2: [insert name of the linked third party] ('the Linked Third Party'), third party linked to the Beneficiary [insert name of the beneficiary] ('the Beneficiary')],*

we

[name of the auditor] ('the Auditor'),

established at

[full address/city/state/province/country],

represented by

[name and function of an authorised representative],

have carried out the procedures agreed with you regarding the costs declared in the Financial Statement(s)[3] of the *[Beneficiary] [Linked Third Party]* concerning the grant agreement [insert grant agreement reference: number, title of the action and acronym] ('the Agreement'),

with a total cost declared of
[total amount] EUR,

and a total of actual costs and 'direct personnel costs declared as unit costs calculated in accordance with the [*Beneficiary's*] [*Linked Third Party's*] usual cost accounting practices' declared of

[sum of total actual costs and total direct personnel costs declared as unit costs calculated in accordance with the *[Beneficiary's] [Linked Third Party's]* usual cost accounting practices] EUR

and **hereby provide our Independent Report of Factual Findings ('the Report')** using the compulsory report format agreed with you.

The Report

Our engagement was carried out in accordance with the terms of reference ('the ToR') appended to this Report. The Report includes the agreed-upon procedures ('the Procedures') carried out and the standard factual findings ('the Findings') examined.

[3] By which the Beneficiary declares costs under the Agreement (see template 'Model Financial Statement' in Annex 4 to the Agreement).

The Procedures were carried out solely to assist the [*Commission*] [*Agency*] in evaluating whether the [*Beneficiary's*] [*Linked Third Party's*] costs in the accompanying Financial Statement(s) were declared in accordance with the Agreement. The *[Commission] [Agency]* draws its own conclusions from the Report and any additional information it may require.

The scope of the Procedures was defined by the Commission. Therefore, the Auditor is not responsible for their suitability or pertinence. Since the Procedures carried out constitute neither an audit nor a review made in accordance with International Standards on Auditing or International Standards on Review Engagements, the Auditor does not give a statement of assurance on the Financial Statements.

Had the Auditor carried out additional procedures or an audit of the *[Beneficiary's] [Linked Third Party's]* Financial Statements in accordance with International Standards on Auditing or International Standards on Review Engagements, other matters might have come to its attention and would have been included in the Report.

Not applicable Findings

We examined the Financial Statement(s) stated above and considered the following Findings not applicable:

Explanation (to be removed from the Report):

*If a Finding was not applicable, it must be marked as '**N.A**.' ('Not applicable') in the corresponding row on the right-hand column of the table and means that the Finding did not have to be corroborated by the Auditor and the related Procedure(s) did not have to be carried out.*

The reasons of the non-application of a certain Finding must be obvious i.e.

i) if no cost was declared under a certain category then the related Finding(s) and Procedure(s) are not applicable;

ii) if the condition set to apply certain Procedure(s) are not met the related Finding(s) and those Procedure(s) are not applicable. For instance, for 'beneficiaries with accounts established in a currency other than euro' the Procedure and Finding related to 'beneficiaries with accounts established in euro' are not applicable. Similarly, if no additional remuneration is paid, the related Finding(s) and Procedure(s) for additional remuneration are not applicable.

List here all Findings considered not applicable for the present engagement and explain the reasons of the non-applicability.

….

Exceptions

Apart from the exceptions listed below, the *[Beneficiary] [Linked Third Party]* provided the Auditor all the documentation and accounting information needed by the Auditor to carry out the requested Procedures and evaluate the Findings.

Explanation (to be removed from the Report):

- *If the Auditor was not able to successfully complete a procedure requested, it must be marked as '**E**' ('Exception') in the corresponding row on the right-hand column of the table. The reason such as the inability to reconcile key information or the unavailability of data that prevents the Auditor from carrying out the Procedure must be indicated below.*
- *If the Auditor cannot corroborate a standard finding after having carried out the corresponding procedure, it must also be marked as '**E**' ('Exception') and, where possible, the reasons why the Finding was not fulfilled and its possible impact must be explained here below.*

List here any exceptions and add any information on the cause and possible consequences of each exception, if known. If the exception is quantifiable, include the corresponding amount.

….

Example (to be removed from the Report):

1. *The Beneficiary was unable to substantiate the Finding number 1 on … because ….*
2. *Finding number 30 was not fulfilled because the methodology used by the Beneficiary to calculate unit costs was different from the one approved by the Commission. The differences were as follows: …*
3. *After carrying out the agreed procedures to confirm the Finding number 31, the Auditor found a difference of _____ EUR. The difference can be explained by …*

Further Remarks

In addition to reporting on the results of the specific procedures carried out, the Auditor would like to make the following general remarks:

Example (to be removed from the Report):

1. *Regarding Finding number 8 the conditions for additional remuneration were considered as fulfilled because …*
2. *In order to be able to confirm the Finding number 15 we carried out the following additional procedures: ….*

Use of this Report

This Report may be used only for the purpose described in the above objective. It was prepared solely for the confidential use of the *[Beneficiary] [Linked Third Party]* and the [*Commission*] [*Agency*], and only to be submitted to the [*Commission*] [*Agency*] in connection with the requirements set out in Article 20.4 of the Agreement. The Report may not be used by the *[Beneficiary] [Linked Third Party]* or by the [*Commission*] [*Agency*] for any other purpose, nor may it be distributed to any other parties. The [*Commission*] [*Agency*] may only disclose the Report to authorised parties, in particular to the European Anti-Fraud Office (OLAF) and the European Court of Auditors.

This Report relates only to the Financial Statement(s) submitted to the *[Commission] [Agency]* by the *[Beneficiary] [Linked Third Party]* for the Agreement. Therefore, it does not extend to any other of the [*Beneficiary's*] [*Linked Third Party's*] Financial Statement(s).

There was no conflict of interest[4] between the Auditor and the Beneficiary *[and Linked Third Party]* in establishing this Report. The total fee paid to the Auditor for providing the Report was EUR _____ (including EUR_____ of deductible VAT).

We look forward to discussing our Report with you and would be pleased to provide any further information or assistance.

[legal name of the Auditor]
[name and function of an authorised representative]
[dd Month yyyy]
Signature of the Auditor

[4] A conflict of interest arises when the Auditor's objectivity to establish the certificate is compromised in fact or in appearance when the Auditor for instance:
- was involved in the preparation of the Financial Statements;
- stands to benefit directly should the certificate be accepted;
- has a close relationship with any person representing the beneficiary;
- is a director, trustee or partner of the beneficiary; or
- is in any other situation that compromises his or her independence or ability to establish the certificate impartially.

Agreed-upon procedures to be performed and standard factual findings to be confirmed by the Auditor

The European Commission reserves the right to i) provide the auditor with additional guidance regarding the procedures to be followed or the facts to be ascertained and the way in which to present them (this may include sample coverage and findings) or to ii) change the procedures, by notifying the Beneficiary in writing. The procedures carried out by the auditor to confirm the standard factual finding are listed in the table below.

If this certificate relates to a Linked Third Party, any reference here below to 'the Beneficiary' is to be considered as a reference to 'the Linked Third Party'.

The 'result' column has three different options: 'C', 'E' and 'N.A.':

- 'C' stands for 'confirmed' and means that the auditor can confirm the 'standard factual finding' and, therefore, there is no exception to be reported.
- 'E' stands for 'exception' and means that the Auditor carried out the procedures but cannot confirm the 'standard factual finding', or that the Auditor was not able to carry out a specific procedure (e.g. because it was impossible to reconcile key information or data were unavailable),
- 'N.A.' stands for 'not applicable' and means that the Finding did not have to be examined by the Auditor and the related Procedure(s) did not have to be carried out. The reasons of the non-application of a certain Finding must be obvious i.e. i) if no cost was declared under a certain category then the related Finding(s) and Procedure(s) are not applicable; ii) if the condition set to apply certain Procedure(s) are not met then the related Finding(s) and Procedure(s) are not applicable. For instance, for 'beneficiaries with accounts established in a currency other than the euro' the Procedure related to 'beneficiaries with accounts established in euro' is not applicable. Similarly, if no additional remuneration is paid, the related Finding(s) and Procedure(s) for additional remuneration are not applicable.

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
A	**ACTUAL PERSONNEL COSTS AND UNIT COSTS CALCULATED BY THE BENEFICIARY IN ACCORDANCE WITH ITS USUAL COST ACCOUNTING PRACTICE**		
	The Auditor draws a sample of persons whose costs were declared in the Financial Statement(s) to carry out the procedures indicated in the consecutive points of this section A. (*The sample should be selected randomly so that it is representative. Full coverage is required if there are fewer than 10 people (including employees, natural persons working under a direct contract and personnel seconded by a third party), otherwise the sample should have a minimum of 10 people, or 10% of the total, whichever number is the highest)* The Auditor sampled _____ people out of the total of _____ people.		

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
A.1	**PERSONNEL COSTS** For the persons included in the sample and working under an employment contract or equivalent act (general procedures for individual actual personnel costs and personnel costs declared as unit costs) To confirm standard factual findings 1-5 listed in the next column, the Auditor reviewed following information/documents provided by the Beneficiary: o a list of the persons included in the sample indicating the period(s) during which they worked for the action, their position (classification or category) and type of contract; o the payslips of the employees included in the sample; o reconciliation of the personnel costs declared in the Financial Statement(s) with the accounting system (project accounting and general ledger) and payroll system; o information concerning the employment status and employment conditions of personnel included in the sample, in particular their employment contracts or equivalent; o the Beneficiary's usual policy regarding payroll matters (e.g. salary policy, overtime policy, variable pay); o applicable national law on taxes, labour and social security and o any other document that supports the personnel costs declared. The Auditor also verified the eligibility of all components of the retribution (see Article 6 GA) and recalculated the personnel costs for employees included in the sample.	1) The employees were i) directly hired by the Beneficiary in accordance with its national legislation, ii) under the Beneficiary's sole technical supervision and responsibility and iii) remunerated in accordance with the Beneficiary's usual practices.	
		2) Personnel costs were recorded in the Beneficiary's accounts/payroll system.	
		3) Costs were adequately supported and reconciled with the accounts and payroll records.	
		4) Personnel costs did not contain any ineligible elements.	
		5) There were no discrepancies between the personnel costs charged to the action and the costs recalculated by the Auditor.	
	Further procedures if 'additional remuneration' is paid To confirm standard factual findings 6-9 listed in the next column, the Auditor: o reviewed relevant documents provided by the Beneficiary (legal form, legal/statutory	6) The Beneficiary paying "additional remuneration" was a non-profit legal entity.	

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
	obligations, the Beneficiary's usual policy on additional remuneration, criteria used for its calculation…); o recalculated the amount of additional remuneration eligible for the action based on the supporting documents received (full-time or part-time work, exclusive or non-exclusive dedication to the action, etc.) to arrive at the applicable FTE/year and pro-rata rate (see data collected in the course of carrying out the procedures under A.2 'Productive hours' and A.4 'Time recording system').	7) The amount of additional remuneration paid corresponded to the Beneficiary's usual remuneration practices and was consistently paid whenever the same kind of work or expertise was required.	
	IF ANY PART OF THE REMUNERATION PAID TO THE EMPLOYEE IS NOT MANDATORY ACCORDING TO THE NATIONAL LAW OR THE EMPLOYMENT CONTRACT ("ADDITIONAL REMUNERATION") AND IS ELIGIBLE UNDER THE PROVISIONS OF ARTICLE 6.2.A.1, THIS CAN BE CHARGED AS ELIGIBLE COST TO THE ACTION UP TO THE FOLLOWING AMOUNT:	8) The criteria used to calculate the additional remuneration were objective and generally applied by the Beneficiary regardless of the source of funding used.	
	(A) IF THE PERSON WORKS FULL TIME AND EXCLUSIVELY ON THE ACTION DURING THE FULL YEAR: UP TO EUR 8 000/YEAR; *(B) IF THE PERSON WORKS EXCLUSIVELY ON THE ACTION BUT NOT FULL-TIME OR NOT FOR THE FULL YEAR: UP TO THE CORRESPONDING PRO-RATA AMOUNT OF EUR 8 000, OR* *(C) IF THE PERSON DOES NOT WORK EXCLUSIVELY ON THE ACTION: UP TO A PRO-RATA AMOUNT CALCULATED IN ACCORDANCE TO ARTICLE 6.2.A.1.*	9) The amount of additional remuneration included in the personnel costs charged to the action was capped at EUR 8,000 per FTE/year (up to the equivalent pro-rata amount if the person did not work on the action full-time during the year or did not work exclusively on the action).	
	Additional procedures in case "unit costs calculated by the Beneficiary in accordance with its usual cost accounting practices" is applied: Apart from carrying out the procedures indicated above to confirm standard factual findings 1-5 and, if applicable, also 6-9, the Auditor carried out following procedures to confirm standard	10) The personnel costs included in the Financial Statement were calculated in accordance with the Beneficiary's usual cost accounting practice. This methodology was consistently	

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
	factual findings 10-13 listed in the next column: o obtained a description of the Beneficiary's usual cost accounting practice to calculate unit costs;. o reviewed whether the Beneficiary's usual cost accounting practice was applied for the Financial Statements subject of the present CFS; o verified the employees included in the sample were charged under the correct category (in accordance with the criteria used by the Beneficiary to establish personnel categories) by reviewing the contract/HR-record or analytical accounting records; o verified that there is no difference between the total amount of personnel costs used in calculating the cost per unit and the total amount of personnel costs recorded in the statutory accounts; o verified whether actual personnel costs were adjusted on the basis of budgeted or estimated elements and, if so, verified whether those elements used are actually relevant for the calculation, objective and supported by documents.	used in all H2020 actions. 11) The employees were charged under the correct category. 12) Total personnel costs used in calculating the unit costs were consistent with the expenses recorded in the statutory accounts. 13) Any estimated or budgeted element used by the Beneficiary in its unit-cost calculation were relevant for calculating personnel costs and corresponded to objective and verifiable information.	
	<u>For natural persons included in the sample and working with the Beneficiary under a direct contract other than an employment contract, such as consultants (no subcontractors).</u> To confirm standard factual findings 14-18 listed in the next column the Auditor reviewed following information/documents provided by the Beneficiary: o the contracts, especially the cost, contract duration, work description, place of work, ownership of the results and reporting obligations to the Beneficiary; o the employment conditions of staff in the same category to compare costs and; o any other document that supports the costs declared and its registration (e.g. invoices,	14) The natural persons reported to the Beneficiary (worked under the Beneficiary's instructions). 15) They worked on the Beneficiary's premises (unless otherwise agreed with the Beneficiary). 16) The results of work carried out belong to the Beneficiary.	

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
	accounting records, etc.).	17) Their costs were not significantly different from those for staff who performed similar tasks under an employment contract with the Beneficiary.	
		18) The costs were supported by audit evidence and registered in the accounts.	
	<u>For personnel seconded by a third party and included in the sample (not subcontractors)</u> To confirm standard factual findings 19-22 listed in the next column, the Auditor reviewed following information/documents provided by the Beneficiary: o their secondment contract(s) notably regarding costs, duration, work description, place of work and ownership of the results; o if there is reimbursement by the Beneficiary to the third party for the resource made available (in-kind contribution against payment): any documentation that supports the costs declared (e.g. contract, invoice, bank payment, and proof of registration in its accounting/payroll, etc.) and reconciliation of the Financial Statement(s) with the accounting system (project accounting and general ledger) as well as any proof that the amount invoiced by the third party did not include any profit; o if there is no reimbursement by the Beneficiary to the third party for the resource made available (in-kind contribution free of charge): a proof of the actual cost borne by the Third Party for the resource made available free of charge to the Beneficiary such as a statement of costs incurred by the Third Party and proof of the registration in the Third Party's accounting/payroll; o any other document that supports the costs declared (e.g. invoices, etc.).	19) Seconded personnel reported to the Beneficiary and worked on the Beneficiary's premises (unless otherwise agreed with the Beneficiary).	
		20) The results of work carried out belong to the Beneficiary.	
		If personnel is seconded against payment: 21) The costs declared were supported with documentation and recorded in the Beneficiary's accounts. The third party did not include any profit.	
		If personnel is seconded free of charge: 22) The costs declared did not exceed the third party's cost as	

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
		recorded in the accounts of the third party and were supported with documentation.	
A.2	**PRODUCTIVE HOURS** To confirm standard factual findings 23-28 listed in the next column, the Auditor reviewed relevant documents, especially national legislation, labour agreements and contracts and time records of the persons included in the sample, to verify that: o the annual productive hours applied were calculated in accordance with one of the methods described below, o the full-time equivalent (FTEs) ratios for employees not working full-time were correctly calculated. If the Beneficiary applied method B, the auditor verified that the correctness in which the total number of hours worked was calculated and that the contracts specified the annual workable hours. If the Beneficiary applied method C, the auditor verified that the 'annual productive hours' applied when calculating the hourly rate were equivalent to at least 90 % of the 'standard annual workable hours'. The Auditor can only do this if the calculation of the standard annual workable hours can be supported by records, such as national legislation, labour agreements, and contracts. *BENEFICIARY'S PRODUCTIVE HOURS' FOR PERSONS WORKING FULL TIME SHALL BE ONE OF THE FOLLOWING METHODS:* ***A.*** *1720 ANNUAL PRODUCTIVE HOURS (PRO-RATA FOR PERSONS NOT WORKING FULL-TIME)* ***B.*** *THE TOTAL NUMBER OF HOURS WORKED BY THE PERSON FOR THE BENEFICIARY IN THE YEAR (THIS METHOD IS ALSO REFERRED TO AS 'TOTAL NUMBER OF HOURS WORKED' IN THE NEXT COLUMN). THE CALCULATION OF THE TOTAL NUMBER OF HOURS WORKED WAS DONE AS FOLLOWS: ANNUAL WORKABLE HOURS OF THE PERSON ACCORDING TO THE EMPLOYMENT*	23) The Beneficiary applied method [*choose one option and delete the others*] [**A**: 1720 hours] [**B**: the 'total number of hours worked'] [**C**: 'standard annual productive hours' used correspond to usual accounting practices]	
		24) Productive hours were calculated annually.	
		25) For employees not working full-time the full-time equivalent (FTE) ratio was correctly applied.	
		If the Beneficiary applied method B. 26) The calculation of the number of 'annual workable hours', overtime and absences was verifiable based on the documents provided by the Beneficiary.	

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
	CONTRACT, APPLICABLE LABOUR AGREEMENT OR NATIONAL LAW PLUS OVERTIME WORKED MINUS ABSENCES (SUCH AS SICK LEAVE OR SPECIAL LEAVE). ***C.** THE STANDARD NUMBER OF ANNUAL HOURS GENERALLY APPLIED BY THE BENEFICIARY FOR ITS PERSONNEL IN ACCORDANCE WITH ITS USUAL COST ACCOUNTING PRACTICES (THIS METHOD IS ALSO REFERRED TO AS 'STANDARD ANNUAL PRODUCTIVE HOURS' IN THE NEXT COLUMN). THIS NUMBER MUST BE AT LEAST 90% OF THE STANDARD ANNUAL WORKABLE HOURS.* *'ANNUAL WORKABLE HOURS' MEANS THE PERIOD DURING WHICH THE PERSONNEL MUST BE WORKING, AT THE EMPLOYER'S DISPOSAL AND CARRYING OUT HIS/HER ACTIVITY OR DUTIES UNDER THE EMPLOYMENT CONTRACT, APPLICABLE COLLECTIVE LABOUR AGREEMENT OR NATIONAL WORKING TIME LEGISLATION.*	26.1) The Beneficiary calculates the hourly rates per full financial year following procedure A.3 (method B is not allowed for beneficiaries calculating hourly rates per month).	
		If the Beneficiary applied method C. 27) The calculation of the number of 'standard annual workable hours' was verifiable based on the documents provided by the Beneficiary.	
		28) The 'annual productive hours' used for calculating the hourly rate were consistent with the usual cost accounting practices of the Beneficiary and were equivalent to at least 90 % of the 'annual workable hours'.	
A.3	**HOURLY PERSONNEL RATES** <u>I) For unit costs calculated in accordance to the Beneficiary's usual cost accounting practice (unit costs):</u> If the Beneficiary has a "Certificate on Methodology to calculate unit costs " (CoMUC) approved by the Commission, the Beneficiary provides the Auditor with a description of the approved methodology and the Commission's letter of acceptance. The Auditor verified that the	29) The Beneficiary applied [*choose one option and delete the other*]: [Option I: "Unit costs (hourly rates) were calculated in accordance with the Beneficiary's usual cost	

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
	Beneficiary has indeed used the methodology approved. If so, no further verification is necessary. If the Beneficiary does not have a "Certificate on Methodology" (CoMUC) approved by the Commission, or if the methodology approved was not applied, then the Auditor: o reviewed the documentation provided by the Beneficiary, including manuals and internal guidelines that explain how to calculate hourly rates; o recalculated the unit costs (hourly rates) of staff included in the sample following the results of the procedures carried out in A.1 and A.2. <u>II) For individual hourly rates:</u> The Auditor: o reviewed the documentation provided by the Beneficiary, including manuals and internal guidelines that explain how to calculate hourly rates; o recalculated the hourly rates of staff included in the sample (recalculation of all hourly rates if the Beneficiary uses annual rates, recalculation of three months selected randomly for every year and person if the Beneficiary uses monthly rates) following the results of the procedures carried out in A.1 and A.2; o (only in case of monthly rates) confirmed that the time spent on parental leave is not deducted, and that, if parts of the basic remuneration are generated over a period longer than a month, the Beneficiary has included only the share which is generated in the month. *"UNIT COSTS CALCULATED BY THE BENEFICIARY IN ACCORDANCE WITH ITS USUAL COST ACCOUNTING PRACTICES":* *IT IS CALCULATED BY DIVIDING THE TOTAL AMOUNT OF PERSONNEL COSTS OF THE CATEGORY TO WHICH THE EMPLOYEE BELONGS VERIFIED IN LINE WITH PROCEDURE A.1 BY THE NUMBER OF FTE AND THE ANNUAL TOTAL PRODUCTIVE HOURS OF THE SAME CATEGORY CALCULATED BY THE BENEFICIARY IN ACCORDANCE WITH PROCEDURE A.2.*	accounting practices"] [Option II: Individual hourly rates were applied]	
		For option I concerning unit costs and if the Beneficiary applies the methodology approved by the Commission (CoMUC): 30) The Beneficiary used the Commission-approved methodology to calculate hourly rates. It corresponded to the organisation's usual cost accounting practices and was applied consistently for all activities irrespective of the source of funding.	
		For option I concerning unit costs and if the Beneficiary applies a methodology not approved by the Commission: 31) The unit costs re-calculated by the Auditor were the same as the rates applied by the Beneficiary.	
		For option II concerning individual hourly rates: 32) The individual rates re-	

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
	HOURLY RATE FOR INDIVIDUAL ACTUAL PERSONAL COSTS: *IT IS CALCULATED FOLLOWING ONE OF THE TWO OPTIONS BELOW:* *A) [OPTION BY DEFAULT] BY DIVIDING THE ACTUAL ANNUAL AMOUNT OF PERSONNEL COSTS OF AN EMPLOYEE VERIFIED IN LINE WITH PROCEDURE A.1 BY THE NUMBER OF ANNUAL PRODUCTIVE HOURS VERIFIED IN LINE WITH PROCEDURE A.2 (FULL FINANCIAL YEAR HOURLY RATE);* *B) BY DIVIDING THE ACTUAL MONTHLY AMOUNT OF PERSONNEL COSTS OF AN EMPLOYEE VERIFIED IN LINE WITH PROCEDURE A.1 BY 1/12 OF THE NUMBER OF ANNUAL PRODUCTIVE HOURS VERIFIED IN LINE WITH PROCEDURE A.2.(MONTHLY HOURLY RATE).*	calculated by the Auditor were the same as the rates applied by the Beneficiary. 32.1) The Beneficiary used only one option (per full financial year or per month) throughout each financial year examined.	
A.4	**TIME RECORDING SYSTEM** To verify that the time recording system ensures the fulfilment of all minimum requirements and that the hours declared for the action were correct, accurate and properly authorised and supported by documentation, the Auditor made the following checks for the persons included in the sample that declare time as worked for the action on the basis of time records: o description of the time recording system provided by the Beneficiary (registration, authorisation, processing in the HR-system); o its actual implementation; o time records were signed at least monthly by the employees (on paper or electronically) and authorised by the project manager or another manager; o the hours declared were worked within the project period; o there were no hours declared as worked for the action if HR-records showed absence due to holidays or sickness (further cross-checks with travels are carried out in B.1 below) ; o the hours charged to the action matched those in the time recording system.	33) All persons recorded their time dedicated to the action on a **daily/ weekly/ monthly** basis using a **paper**/**computer-based** system. (*delete the answers that are not applicable)*	
		34) Their time-records were authorised at least monthly by the project manager or other superior.	
		35) Hours declared were worked within the project period and were consistent with the presences/absences recorded in HR-records.	

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
	ONLY THE HOURS WORKED ON THE ACTION CAN BE CHARGED. ALL WORKING TIME TO BE CHARGED SHOULD BE RECORDED THROUGHOUT THE DURATION OF THE PROJECT, ADEQUATELY SUPPORTED BY EVIDENCE OF THEIR REALITY AND RELIABILITY (SEE SPECIFIC PROVISIONS BELOW FOR PERSONS WORKING EXCLUSIVELY FOR THE ACTION WITHOUT TIME RECORDS).	36) There were no discrepancies between the number of hours charged to the action and the number of hours recorded.	
	<u>If the persons are working exclusively for the action and without time records</u> For the persons selected that worked exclusively for the action without time records, the Auditor verified evidence available demonstrating that they were in reality exclusively dedicated to the action and that the Beneficiary signed a declaration confirming that they have worked exclusively for the action.	37) The exclusive dedication is supported by a declaration signed by the Beneficiary's and by any other evidence gathered.	
B	**COSTS OF SUBCONTRACTING**		
B.1	**The Auditor obtained the detail/breakdown of subcontracting costs and sampled _____ cost items selected randomly** (*full coverage is required if there are fewer than 10 items, otherwise the sample should have a minimum of 10 item, or 10% of the total, whichever number is highest*). To confirm standard factual findings 38-42 listed in the next column, the Auditor reviewed the following for the items included in the sample: o the use of subcontractors was foreseen in Annex 1; o subcontracting costs were declared in the subcontracting category of the Financial Statement; o supporting documents on the selection and award procedure were followed; o the Beneficiary ensured best value for money (key elements to appreciate the respect of this principle are the award of the subcontract to the bid offering best price-quality ratio, under conditions of transparency and equal treatment. In case an existing framework contract was used the Beneficiary ensured it was established on the basis of the principle of best value for money under conditions of transparency and equal treatment).	38) The use of claimed subcontracting costs was foreseen in Annex 1 and costs were declared in the Financial Statements under the subcontracting category.	
		39) There were documents of requests to different providers, different offers and assessment of the offers before selection of the provider in line with internal procedures and procurement rules. Subcontracts were awarded in accordance with the principle of best value for money. *(When different offers were not collected the Auditor explains*	

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
	In particular, i. if the Beneficiary acted as a contracting authority within the meaning of Directive 2004/18/EC (or 2014/24/EU) or of Directive 2004/17/EC (or 2014/25/EU), the Auditor verified that the applicable national law on public procurement was followed and that the subcontracting complied with the Terms and Conditions of the Agreement. ii. if the Beneficiary did not fall under the above-mentioned category the Auditor verified that the Beneficiary followed their usual procurement rules and respected the Terms and Conditions of the Agreement.. For the items included in the sample the Auditor also verified that: o the subcontracts were not awarded to other Beneficiaries in the consortium; o there were signed agreements between the Beneficiary and the subcontractor; o there was evidence that the services were provided by subcontractor;	*the reasons provided by the Beneficiary under the caption "Exceptions" of the Report. The Commission will analyse this information to evaluate whether these costs might be accepted as eligible)*	
		40) The subcontracts were not awarded to other Beneficiaries of the consortium.	
		41) All subcontracts were supported by signed agreements between the Beneficiary and the subcontractor.	
		42) There was evidence that the services were provided by the subcontractors.	
C	**COSTS OF PROVIDING FINANCIAL SUPPORT TO THIRD PARTIES**		
C.1	**The Auditor obtained the detail/breakdown of the costs of providing financial support to third parties and sampled _____ cost items selected randomly** (*full coverage is required if there are fewer than 10 items, otherwise the sample should have a minimum of 10 item, or 10% of the total, whichever number is highest*). The Auditor verified that the following minimum conditions were met: a) the maximum amount of financial support for each third party did not exceed EUR 60 000, unless explicitly mentioned in Annex 1;	43) All minimum conditions were met	

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
	b) the financial support to third parties was agreed in Annex 1 of the Agreement and the other provisions on financial support to third parties included in Annex 1 were respected.		

D	**OTHER ACTUAL DIRECT COSTS**		
D.1	**COSTS OF TRAVEL AND RELATED SUBSISTENCE ALLOWANCES** **The Auditor sampled _____ cost items selected randomly** (*full coverage is required if there are fewer than 10 items, otherwise the sample should have a minimum of 10 item, or 10% of the total, whichever number is the highest*). The Auditor inspected the sample and verified that: o travel and subsistence costs were consistent with the Beneficiary's usual policy for travel. In this context, the Beneficiary provided evidence of its normal policy for travel costs (e.g. use of first class tickets, reimbursement by the Beneficiary on the basis of actual costs, a lump sum or per diem) to enable the Auditor to compare the travel costs charged with this policy; o travel costs are correctly identified and allocated to the action (e.g. trips are directly linked to the action) by reviewing relevant supporting documents such as minutes of meetings, workshops or conferences, their registration in the correct project account, their consistency with time records or with the dates/duration of the workshop/conference; o no ineligible costs or excessive or reckless expenditure was declared.	44) Costs were incurred, approved and reimbursed in line with the Beneficiary's usual policy for travels.	
		45) There was a link between the trip and the action.	
		46) The supporting documents were consistent with each other regarding subject of the trip, dates, duration and reconciled with time records and accounting.	
		47) No ineligible costs or excessive or reckless expenditure was declared.	
D.2	**DEPRECIATION COSTS FOR EQUIPMENT, INFRASTRUCTURE OR OTHER ASSETS** **The Auditor sampled _____ cost items selected randomly** (*full coverage is required if there are fewer than 10 items, otherwise the sample should have a minimum of 10 item, or 10% of the total, whichever number is the highest*). For "equipment, infrastructure or other assets" [from now on called "asset(s)"] selected in the sample the Auditor verified that: o the assets were acquired in conformity with the Beneficiary's internal guidelines and procedures; o they were correctly allocated to the action (with supporting documents such as delivery	48) Procurement rules, principles and guides were followed.	
		49) There was a link between the grant agreement and the asset charged to the action.	
		50) The asset charged to the action was traceable to the accounting records and the underlying documents.	

	note invoice or any other proof demonstrating the link to the action) o they were entered in the accounting system; o the extent to which the assets were used for the action (as a percentage) was supported by reliable documentation (e.g. usage overview table); The Auditor recalculated the depreciation costs and verified that they were in line with the applicable rules in the Beneficiary's country and with the Beneficiary's usual accounting policy (e.g. depreciation calculated on the acquisition value). The Auditor verified that no ineligible costs such as deductible VAT, exchange rate losses, excessive or reckless expenditure were declared (see Article 6.5 GA).	51) The depreciation method used to charge the asset to the action was in line with the applicable rules of the Beneficiary's country and the Beneficiary's usual accounting policy. 52) The amount charged corresponded to the actual usage for the action. 53) No ineligible costs or excessive or reckless expenditure were declared.	
D.3	**COSTS OF OTHER GOODS AND SERVICES** **The Auditor sampled _____ cost items selected randomly** (*full coverage is required if there are fewer than 10 items, otherwise the sample should have a minimum of 10 item, or 10% of the total, whichever number is highest*). For the purchase of goods, works or services included in the sample the Auditor verified that: o the contracts did not cover tasks described in Annex 1; o they were correctly identified, allocated to the proper action, entered in the accounting system (traceable to underlying documents such as purchase orders, invoices and accounting); o the goods were not placed in the inventory of durable equipment; o the costs charged to the action were accounted in line with the Beneficiary's usual accounting practices; o no ineligible costs or excessive or reckless expenditure were declared (see Article 6 GA). In addition, the Auditor verified that these goods and services were acquired in conformity with the Beneficiary's internal guidelines and procedures, in particular: o if Beneficiary acted as a contracting authority within the meaning of Directive	54) Contracts for works or services did not cover tasks described in Annex 1. 55) Costs were allocated to the correct action and the goods were not placed in the inventory of durable equipment. 56) The costs were charged in line with the Beneficiary's accounting policy and were adequately supported. 57) No ineligible costs or excessive or reckless expenditure were declared. For internal invoices/charges only the cost element was charged, without any mark-ups.	

	2004/18/EC (or 2014/24/EU) or of Directive 2004/17/EC (or 2014/25/EU), the Auditor verified that the applicable national law on public procurement was followed and that the procurement contract complied with the Terms and Conditions of the Agreement. o if the Beneficiary did not fall into the category above, the Auditor verified that the Beneficiary followed their usual procurement rules and respected the Terms and Conditions of the Agreement. For the items included in the sample the Auditor also verified that: o the Beneficiary ensured best value for money (key elements to appreciate the respect of this principle are the award of the contract to the bid offering best price-quality ratio, under conditions of transparency and equal treatment. In case an existing framework contract was used the Auditor also verified that the Beneficiary ensured it was established on the basis of the principle of best value for money under conditions of transparency and equal treatment); *SUCH GOODS AND SERVICES INCLUDE, FOR INSTANCE, CONSUMABLES AND SUPPLIES, DISSEMINATION (INCLUDING OPEN ACCESS), PROTECTION OF RESULTS, SPECIFIC EVALUATION OF THE ACTION IF IT IS REQUIRED BY THE AGREEMENT, CERTIFICATES ON THE FINANCIAL STATEMENTS IF THEY ARE REQUIRED BY THE AGREEMENT AND CERTIFICATES ON THE METHODOLOGY, TRANSLATIONS, REPRODUCTION.*	58) Procurement rules, principles and guides were followed. There were documents of requests to different providers, different offers and assessment of the offers before selection of the provider in line with internal procedures and procurement rules. The purchases were made in accordance with the principle of best value for money. *(When different offers were not collected the Auditor explains the reasons provided by the Beneficiary under the caption "Exceptions" of the Report. The Commission will analyse this information to evaluate whether these costs might be accepted as eligible)*	
D.4	**AGGREGATED CAPITALISED AND OPERATING COSTS OF RESEARCH INFRASTRUCTURE** The Auditor ensured the existence of a positive ex-ante assessment (issued by the EC Services) of the cost accounting methodology of the Beneficiary allowing it to apply the guidelines on direct costing for large research infrastructures in Horizon 2020. ***In the cases that a positive ex-ante assessment has been issued*** *(see the standard factual findings 59-60 on the next column)**,***	59) The costs declared as direct costs for Large Research Infrastructures (in the appropriate line of the Financial Statement) comply with the methodology described in the positive ex-ante assessment report.	

	The Auditor ensured that the beneficiary has applied consistently the methodology that is explained and approved in the positive ex ante assessment; ***In the cases that a positive ex-ante assessment has NOT been issued*** *(see the standard factual findings 61 on the next column),* The Auditor verified that no costs of Large Research Infrastructure have been charged as direct costs in any costs category; ***In the cases that a draft ex-ante assessment report has been issued with recommendation for further changes*** *(see the standard factual findings 61 on the next column),* • The Auditor followed the same procedure as above (when a positive ex-ante assessment has NOT yet been issued) and paid particular attention (testing reinforced) to the cost items for which the draft ex-ante assessment either rejected the inclusion as direct costs for Large Research Infrastructures or issued recommendations.	60) Any difference between the methodology applied and the one positively assessed was extensively described and adjusted accordingly. 61) The direct costs declared were free from any indirect costs items related to the Large Research Infrastructure.	
E	**USE OF EXCHANGE RATES**		
E.1	a) For Beneficiaries with accounts established in a currency other than euros **The Auditor sampled _____ cost items selected randomly and verified that the exchange rates used for converting other currencies into euros were in accordance with the following rules established in the Agreement** (*full coverage is required if there are fewer than 10 items, otherwise the sample should have a minimum of 10 item, or 10% of the total, whichever number is highest)*: *COSTS RECORDED IN THE ACCOUNTS IN A CURRENCY OTHER THAN EURO SHALL BE CONVERTED INTO EURO AT THE AVERAGE OF THE DAILY EXCHANGE RATES PUBLISHED IN THE C SERIES OF OFFICIAL JOURNAL OF THE EUROPEAN UNION (https://www.ecb.int/stats/exchange/eurofxref/html/index.en.html), DETERMINED OVER THE CORRESPONDING REPORTING PERIOD.* *IF NO DAILY EURO EXCHANGE RATE IS PUBLISHED IN THE OFFICIAL JOURNAL OF THE EUROPEAN UNION FOR THE CURRENCY IN QUESTION, CONVERSION SHALL BE MADE AT THE AVERAGE OF THE MONTHLY ACCOUNTING RATES ESTABLISHED BY THE COMMISSION AND PUBLISHED ON ITS WEBSITE (http://ec.europa.eu/budget/contracts_grants/info_contracts/inforeuro/inforeuro_en.cfm), DETERMINED OVER THE CORRESPONDING REPORTING PERIOD.*	62) The exchange rates used to convert other currencies into Euros were in accordance with the rules established of the Grant Agreement and there was no difference in the final figures.	

	b) For Beneficiaries with accounts established in euros **The Auditor sampled _____ cost items selected randomly and verified that the exchange rates used for converting other currencies into euros were in accordance with the following rules established in the Agreement** (*full coverage is required if there are fewer than 10 items, otherwise the sample should have a minimum of 10 item, or 10% of the total, whichever number is highest)*: *COSTS INCURRED IN ANOTHER CURRENCY SHALL BE CONVERTED INTO EURO BY APPLYING THE BENEFICIARY'S USUAL ACCOUNTING PRACTICES.*	63) The Beneficiary applied its usual accounting practices.	

[legal name of the audit firm]
[name and function of an authorised representative]
[dd Month yyyy]
<Signature of the Auditor>

ANNEX 6

MODEL FOR THE CERTIFICATE ON THE METHODOLOGY

- **For options [*in italics in square brackets*]: choose the applicable option. Options not chosen should be deleted.**
- **For fields in [grey in square brackets]: enter the appropriate data.**

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Terms of reference for an audit engagement for a methodology certificate in connection with one or more grant agreements financed under the Horizon 2020 Research and Innovation Framework Programme

This document sets out the '**Terms of Reference (ToR)**' under which

[OPTION 1: [insert name of the beneficiary] ('the Beneficiary')] [OPTION 2: [insert name of the linked third party] ('the Linked Third Party'), third party linked to the Beneficiary [insert name of the beneficiary] ('the Beneficiary')]

agrees to engage

[**insert legal name of the auditor**] ('the Auditor')

to produce an independent report of factual findings ('the Report') concerning the *[Beneficiary's] [Linked Third Party's]* usual accounting practices for calculating and claiming direct personnel costs declared as unit costs ('the Methodology') in connection with grant agreements financed under the Horizon 2020 Research and Innovation Framework Programme.

The procedures to be carried out for the assessment of the methodology will be based on the grant agreement(s) detailed below:

[title and number of the grant agreement(s)] ('the Agreement(s)')

The Agreement(s) has(have) been concluded between the Beneficiary and *[OPTION 1: the European Union, represented by the European Commission ('the Commission')][OPTION 2: the European Atomic Energy Community (Euratom,) represented by the European Commission ('the Commission')][OPTION 3: the [Research Executive Agency (REA)] [European Research Council Executive Agency (ERCEA)] [Innovation and Networks Executive Agency (INEA)] [Executive Agency for Small and Medium-sized Enterprises (EASME)] ('the Agency'), under the powers delegated by the European Commission ('the Commission').]*.

The *[Commission] [Agency]* is mentioned as a signatory of the Agreement with the Beneficiary only. The *[European Union] [Euratom] [Agency]* is not a party to this engagement.

1.1 Subject of the engagement

According to Article 18.1.2 of the Agreement, beneficiaries *[and linked third parties]* that declare direct personnel costs as unit costs calculated in accordance with their usual cost accounting practices may submit to the *[Commission] [Agency]*, for approval, a certificate on the methodology ('CoMUC') stating that there are adequate records and documentation to prove that their cost accounting practices used comply with the conditions set out in Point A of Article 6.2.

The subject of this engagement is the CoMUC which is composed of two separate documents:

- the Terms of Reference ('the ToR') to be signed by the *[Beneficiary] [Linked Third Party]* and the Auditor;

- the Auditor's Independent Report of Factual Findings ('the Report') issued on the Auditor's letterhead, dated, stamped and signed by the Auditor which includes; the standard statements ('the Statements') evaluated and signed by the *[Beneficiary] [Linked Third Party]*, the agreed-upon procedures ('the Procedures') performed by the Auditor and the standard factual findings

('the Findings') assessed by the Auditor. The Statements, Procedures and Findings are summarised in the table that forms part of the Report.

The information provided through the Statements, the Procedures and the Findings will enable the Commission to draw conclusions regarding the existence of the *[Beneficiary's] [Linked Third Party's]* usual cost accounting practice and its suitability to ensure that direct personnel costs claimed on that basis comply with the provisions of the Agreement. The Commission draws its own conclusions from the Report and any additional information it may require.

1.2 Responsibilities

The parties to this agreement are the *[Beneficiary] [Linked Third Party]* and the Auditor.

The *[Beneficiary] [Linked Third Party]:*

- is responsible for preparing financial statements for the Agreement(s) ('the Financial Statements') in compliance with those Agreements;
- is responsible for providing the Financial Statement(s) to the Auditor and enabling the Auditor to reconcile them with the *[Beneficiary's] [Linked Third Party's]* accounting and bookkeeping system and the underlying accounts and records. The Financial Statement(s) will be used as a basis for the procedures which the Auditor will carry out under this ToR;
- is responsible for its Methodology and liable for the accuracy of the Financial Statement(s);
- is responsible for endorsing or refuting the Statements indicated under the heading 'Statements to be made by the Beneficiary/ Linked Third Party' in the first column of the table that forms part of the Report;
- must provide the Auditor with a signed and dated representation letter;
- accepts that the ability of the Auditor to carry out the Procedures effectively depends upon the *[Beneficiary] [Linked Third Party]* providing full and free access to the *[Beneficiary's] [Linked Third Party's]* staff and to its accounting and other relevant records.

The Auditor:

- *[Option 1 by default: is qualified to carry out statutory audits of accounting documents in accordance with 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, amending Council Directives 78/660/EEC and 83/349/EEC and repealing Council Directive 84/253/EEC or similar national regulations].*
- *[Option 2 if the Beneficiary or Linked Third Party has an independent Public Officer: is a competent and independent Public Officer for which the relevant national authorities have established the legal capacity to audit the Beneficiary].*
- *[Option 3 if the Beneficiary or Linked Third Party is an international organisation: is an [internal] [external] auditor in accordance with the internal financial regulations and procedures of the international organisation].*

The Auditor:

- must be independent from the Beneficiary *[and the Linked Third Party]*, in particular, it must not have been involved in preparing the Beneficiary's *[and Linked Third Party's]* Financial Statement(s);
- must plan work so that the Procedures may be carried out and the Findings may be assessed;
- must adhere to the Procedures laid down and the compulsory report format;
- must carry out the engagement in accordance with these ToR;
- must document matters which are important to support the Report;
- must base its Report on the evidence gathered;
- must submit the Report to the *[Beneficiary] [Linked Third Party]*.

The Commission sets out the Procedures to be carried out and the Findings to be endorsed by the Auditor. The Auditor is not responsible for their suitability or pertinence. As this engagement is not an assurance engagement the Auditor does not provide an audit opinion or a statement of assurance.

1.3 Applicable Standards

The Auditor must comply with these Terms of Reference and with[1]:

- the International Standard on Related Services ('ISRS') 4400 *Engagements to perform Agreed-upon Procedures regarding Financial Information* as issued by the International Auditing and Assurance Standards Board (IAASB);
- the *Code of Ethics for Professional Accountants* issued by the International Ethics Standards Board for Accountants (IESBA). Although ISRS 4400 states that independence is not a requirement for engagements to carry out agreed-upon procedures, the Commission requires that the Auditor also complies with the Code's independence requirements.

The Auditor's Report must state that there was no conflict of interests in establishing this Report between the Auditor and the Beneficiary *[and the Linked Third Party]* that could have a bearing on the Report, and must specify – if the service is invoiced - the total fee paid to the Auditor for providing the Report.

1.4 Reporting

The Report must be written in the language of the Agreement (see Article 20.7 of the Agreement).

Under Article 22 of the Agreement, the Commission, *[the Agency]*, the European Anti-Fraud Office and the Court of Auditors have the right to audit any work that is carried out under the action and for which costs are declared from *[the European Union] [Euratom]* budget. This includes work related to this engagement. The Auditor must provide access to all working papers related to this assignment if the Commission*[, the Agency]*, the European Anti-Fraud Office or the European Court of Auditors requests them.

1.5 Timing

The Report must be provided by [dd Month yyyy].

1.6 Other Terms

[The [Beneficiary] [Linked Third Party] and the Auditor can use this section to agree other specific terms, such as the Auditor's fees, liability, applicable law, etc. Those specific terms must not contradict the terms specified above.]

[legal name of the Auditor]	[legal name of the [Beneficiary] [Linked Third Party]]
[name & title of authorised representative]	[name & title of authorised representative]
[dd Month yyyy]	[dd Month yyyy]
Signature of the Auditor Signature	Signature of the *[Beneficiary] [Linked Third Party]*

[1] Supreme Audit Institutions applying INTOSAI-standards may carry out the Procedures according to the corresponding International Standards of Supreme Audit Institutions and code of ethics issued by INTOSAI instead of the International Standard on Related Services ('ISRS') 4400 and the Code of Ethics for Professional Accountants issued by the IAASB and the IESBA.

Independent report of factual findings on the methodology concerning grant agreements financed under the Horizon 2020 Research and Innovation Framework Programme

(To be printed on letterhead paper of the auditor)

To
[name of contact person(s)], [Position]
[[Beneficiary's] [Linked Third Party's] name]
[Address]
[dd Month yyyy]

Dear [Name of contact person(s)],

As agreed under the terms of reference dated [dd Month yyyy]

with *[OPTION 1: [insert name of the beneficiary] ('the Beneficiary')] [OPTION 2: [insert name of the linked third party] ('the Linked Third Party'), third party linked to the Beneficiary [insert name of the beneficiary] ('the Beneficiary')]*,

we

[name of the auditor] ('the Auditor'),

established at

[full address/city/state/province/country],

represented by

[name and function of an authorised representative],

have carried out the agreed-upon procedures ('the Procedures') and provide hereby our Independent Report of Factual Findings ('the Report'), concerning the *[Beneficiary's] [Linked Third Party's]* usual accounting practices for calculating and declaring direct personnel costs declared as unit costs ('the Methodology').

You requested certain procedures to be carried out in connection with the grant(s)

[title and number of the grant agreement(s)] ('the Agreement(s)').

The Report

Our engagement was carried out in accordance with the terms of reference ('the ToR') appended to this Report. The Report includes: the standard statements ('the Statements') made by the *[Beneficiary] [Linked Third Party]*, the agreed-upon procedures ('the Procedures') carried out and the standard factual findings ('the Findings') confirmed by us.

The engagement involved carrying out the Procedures and assessing the Findings and the documentation requested appended to this Report, the results of which the Commission uses to draw conclusions regarding the acceptability of the Methodology applied by the *[Beneficiary] [Linked Third Party]*.

The Report covers the methodology used from [dd Month yyyy]. In the event that the *[Beneficiary] [Linked Third Party]* changes this methodology, the Report will not be applicable to any Financial Statement[1] submitted thereafter.

The scope of the Procedures and the definition of the standard statements and findings were determined solely by the Commission. Therefore, the Auditor is not responsible for their suitability or pertinence.

Since the Procedures carried out constitute neither an audit nor a review made in accordance with International Standards on Auditing or International Standards on Review Engagements, we do not give a statement of assurance on the costs declared on the basis of the *[Beneficiary's] [Linked Third Party's]* Methodology. Had we carried out additional procedures or had we performed an audit or review in accordance with these standards, other matters might have come to its attention and would have been included in the Report.

Exceptions

Apart from the exceptions listed below, the *[Beneficiary] [Linked Third Party]* agreed with the standard Statements and provided the Auditor all the documentation and accounting information needed by the Auditor to carry out the requested Procedures and corroborate the standard Findings.

List here any exception and add any information on the cause and possible consequences of each exception, if known. If the exception is quantifiable, also indicate the corresponding amount.

…..

Explanation of possible exceptions in the form of examples (to be removed from the Report):

i. the [Beneficiary] [Linked Third Party] did not agree with the standard Statement number … because…;

ii. the Auditor could not carry out the procedure … established because …. (e.g. due to the inability to reconcile key information or the unavailability or inconsistency of data);

iii. the Auditor could not confirm or corroborate the standard Finding number … because ….

Remarks

We would like to add the following remarks relevant for the proper understanding of the Methodology applied by the [Beneficiary] [Linked Third Party] or the results reported:

Example (to be removed from the Report):

Regarding the methodology applied to calculate hourly rates …

Regarding standard Finding 15 it has to be noted that …

The [Beneficiary] [Linked Third Party] explained the deviation from the benchmark statement XXIV concerning time recording for personnel with no exclusive dedication to the action in the following manner: …

Annexes

Please provide the following documents to the auditor and annex them to the report when submitting this CoMUC to the Commission:

[1] Financial Statement in this context refers solely to Annex 4 of the Agreement by which the Beneficiary declares costs under the Agreement.

1. Brief description of the methodology for calculating personnel costs, productive hours and hourly rates;
2. Brief description of the time recording system in place;
3. An example of the time records used by the [*Beneficiary] [Linked Third Party*];
4. Description of any budgeted or estimated elements applied, together with an explanation as to why they are relevant for calculating the personnel costs and how they are based on objective and verifiable information;
5. A summary sheet with the hourly rate for direct personnel declared by the [*Beneficiary*] [*Linked Third Party*] and recalculated by the Auditor for each staff member included in the sample (the names do not need to be reported);
6. A comparative table summarising for each person selected in the sample a) the time claimed by the [*Beneficiary*] [*Linked Third Party*] in the Financial Statement(s) and b) the time according to the time record verified by the Auditor;
7. A copy of the letter of representation provided to the Auditor.

Use of this Report

This Report has been drawn up solely for the purpose given under Point 1.1 Reasons for the engagement.

The Report:

- is confidential and is intended to be submitted to the Commission by the [*Beneficiary*] [*Linked Third Party*] in connection with Article 18.1.2 of the Agreement;
- may not be used by the [*Beneficiary*] [*Linked Third Party*] or by the Commission for any other purpose, nor distributed to any other parties;
- may be disclosed by the Commission only to authorised parties, in particular the European Anti-Fraud Office (OLAF) and the European Court of Auditors.
- relates only to the usual cost accounting practices specified above and does not constitute a report on the Financial Statements of the [*Beneficiary*] [*Linked Third Party*].

No conflict of interest[2] exists between the Auditor and the Beneficiary *[and the Linked Third Party*] that could have a bearing on the Report. The total fee paid to the Auditor for producing the Report was EUR _____ (including EUR _____ of deductible VAT).

We look forward to discussing our Report with you and would be pleased to provide any further information or assistance which may be required.

Yours sincerely

[legal name of the Auditor]
[name and title of the authorised representative]
[dd Month yyyy]
Signature of the Auditor

[2] A conflict of interest arises when the Auditor's objectivity to establish the certificate is compromised in fact or in appearance when the Auditor for instance:
- was involved in the preparation of the Financial Statements;
- stands to benefit directly should the certificate be accepted;
- has a close relationship with any person representing the beneficiary;
- is a director, trustee or partner of the beneficiary; or
- is in any other situation that compromises his or her independence or ability to establish the certificate impartially.

Statements to be made by the Beneficiary/Linked Third Party ('the Statements') and Procedures to be carried out by the Auditor ('the Procedures') and standard factual findings ('the Findings') to be confirmed by the Auditor

The Commission reserves the right to provide the auditor with guidance regarding the Statements to be made, the Procedures to be carried out or the Findings to be ascertained and the way in which to present them. The Commission reserves the right to vary the Statements, Procedures or Findings by written notification to the Beneficiary/Linked Third Party to adapt the procedures to changes in the grant agreement(s) or to any other circumstances.

If this methodology certificate relates to the Linked Third Party's usual accounting practices for calculating and claiming direct personnel costs declared as unit costs any reference here below to 'the Beneficiary' is to be considered as a reference to 'the Linked Third Party'.

Please explain any discrepancies in the body of the Report.	
Statements to be made by Beneficiary	**Procedures to be carried out and Findings to be confirmed by the Auditor**
A. Use of the Methodology I. The cost accounting practice described below has been in use since *[*dd Month yyyy*]*. II. The next planned alteration to the methodology used by the Beneficiary will be from [dd Month yyyy*]*.	**Procedure:** ✓ The Auditor checked these dates against the documentation the Beneficiary has provided. **Factual finding:** 1. The dates provided by the Beneficiary were consistent with the documentation.
B. Description of the Methodology III. The methodology to calculate unit costs is being used in a consistent manner and is reflected in the relevant procedures. *[Please describe the methodology your entity uses to calculate <u>personnel</u> costs, productive hours and hourly rates, present your description to the Auditor and annex it to this certificate]* *[If the statement of section "B. Description of the methodology" cannot be endorsed by the Beneficiary or there is no written methodology to calculate unit costs it should be listed here below and reported as exception by the Auditor in the main Report of Factual Findings:* - *...]*	**Procedure:** ✓ The Auditor reviewed the description, the relevant manuals and/or internal guidance documents describing the methodology. **Factual finding:** 2. The brief description was consistent with the relevant manuals, internal guidance and/or other documentary evidence the Auditor has reviewed. 3. The methodology was generally applied by the Beneficiary as part of its usual costs accounting practices.
C. **Personnel costs** <u>General</u>	**Procedure:** *The Auditor draws a sample of employees to carry out the procedures indicated in*

Please explain any discrepancies in the body of the Report.	
Statements to be made by Beneficiary	**Procedures to be carried out and Findings to be confirmed by the Auditor**
IV. The unit costs (hourly rates) are limited to salaries including during parental leave, social security contributions, taxes and other costs included in the remuneration required under national law and the employment contract or equivalent appointing act; V. Employees are hired directly by the Beneficiary in accordance with national law, and work under its sole supervision and responsibility; VI. The Beneficiary remunerates its employees in accordance with its usual practices. This means that personnel costs are charged in line with the Beneficiary's usual payroll policy (e.g. salary policy, overtime policy, variable pay) and no special conditions exist for employees assigned to tasks relating to the European Union or Euratom, unless explicitly provided for in the grant agreement(s); VII. The Beneficiary allocates its employees to the relevant group/category/cost centre for the purpose of the unit cost calculation in line with the usual cost accounting practice; VIII. Personnel costs are based on the payroll system and accounting system. IX. Any exceptional adjustments of actual personnel costs resulted from relevant budgeted or estimated elements and were based on objective and verifiable information. *[Please describe the 'budgeted or estimated elements' and their relevance to personnel costs, and explain how they were reasonable and based on objective and verifiable information, present your explanation to the Auditor and annex it to this certificate]*. X. Personnel costs claimed do not contain any of the following ineligible costs: costs related to return on capital; debt and debt service charges; provisions for future losses or debts; interest owed; doubtful debts; currency exchange losses; bank costs charged by the Beneficiary's bank for transfers from the Commission/Agency; excessive or reckless expenditure; deductible VAT or costs incurred during suspension of the implementation of the action. XI. Personnel costs were not declared under another EU or Euratom grant (including grants awarded by a Member State and financed by the EU budget and grants awarded by bodies other than the Commission/Agency for the purpose of implementing the EU budget).	*this section C and the following sections D to F.* *[The Auditor has drawn a random sample of 10 full-time equivalents made up of employees assigned to the action(s). If fewer than 10 full-time equivalents are assigned to the action(s), the Auditor has selected a sample of 10 full-time equivalents consisting of all employees assigned to the action(s), complemented by other employees irrespective of their assignments.]*. For this sample: ✓ the Auditor reviewed all documents relating to personnel costs such as employment contracts, payslips, payroll policy (e.g. salary policy, overtime policy, variable pay policy), accounting and payroll records, applicable national tax , labour and social security law and any other documents corroborating the personnel costs claimed; ✓ in particular, the Auditor reviewed the employment contracts of the employees in the sample to verify that: i. they were employed directly by the Beneficiary in accordance with applicable national legislation; ii. they were working under the sole technical supervision and responsibility of the latter; iii. they were remunerated in accordance with the Beneficiary's usual practices; iv. they were allocated to the correct group/category/cost centre for the purposes of calculating the unit cost in line with the Beneficiary's usual cost accounting practices; ✓ the Auditor verified that any ineligible items or any costs claimed under other costs categories or costs covered by other types of grant or by other grants financed from the European Union budget have not been taken into account when calculating the personnel costs; ✓ the Auditor numerically reconciled the total amount of personnel costs used to calculate the unit cost with the total amount of personnel costs recorded in the statutory accounts and the payroll system. ✓ to the extent that actual personnel costs were adjusted on the basis of budgeted or estimated elements, the Auditor carefully examined those elements and checked the information source to confirm that they correspond to objective and verifiable information;

Please explain any discrepancies in the body of the Report.	
Statements to be made by Beneficiary	**Procedures to be carried out and Findings to be confirmed by the Auditor**
<u>If additional remuneration as referred to in the grant agreement(s) is paid</u> XII. The Beneficiary is a non-profit legal entity; XIII. The additional remuneration is part of the beneficiary's usual remuneration practices and paid consistently whenever the relevant work or expertise is required; XIV. The criteria used to calculate the additional remuneration are objective and generally applied regardless of the source of funding; XV. The additional remuneration included in the personnel costs used to calculate the hourly rates for the grant agreement(s) is capped at EUR 8 000 per full-time equivalent (reduced proportionately if the employee is not assigned exclusively to the action). *[If certain statement(s) of section "C. Personnel costs" cannot be endorsed by the Beneficiary they should be listed here below and reported as exception by the Auditor in the main Report of Factual Findings:* *- ...]*	✓ if additional remuneration has been claimed, the Auditor verified that the Beneficiary was a non-profit legal entity, that the amount was capped at EUR 8 000 per full-time equivalent and that it was reduced proportionately for employees not assigned exclusively to the action(s). ✓ the Auditor recalculated the personnel costs for the employees in the sample. **Factual finding:** 4. All the components of the remuneration that have been claimed as personnel costs are supported by underlying documentation. 5. The employees in the sample were employed directly by the Beneficiary in accordance with applicable national law and were working under its sole supervision and responsibility. 6. Their employment contracts were in line with the Beneficiary's usual policy; 7. Personnel costs were duly documented and consisted solely of salaries, social security contributions (pension contributions, health insurance, unemployment fund contributions, etc.), taxes and other statutory costs included in the remuneration (holiday pay, thirteenth month's pay, etc.); 8. The totals used to calculate the personnel unit costs are consistent with those registered in the payroll and accounting records; 9. To the extent that actual personnel costs were adjusted on the basis of budgeted or estimated elements, those elements were relevant for calculating the personnel costs and correspond to objective and verifiable information. The budgeted or estimated elements used are: — (indicate the elements and their values). 10. Personnel costs contained no ineligible elements; 11. Specific conditions for eligibility were fulfilled when additional remuneration was paid: a) the Beneficiary is registered in the grant agreements as a non-profit legal entity; b) it was paid according to objective criteria generally applied regardless of the source of funding used and c) remuneration was capped at EUR 8 000 per full-time equivalent (or up to up to the equivalent pro-rata amount if the person did not work on the action full-time during the year or did not work exclusively on the action).

Please explain any discrepancies in the body of the Report.	
Statements to be made by Beneficiary	**Procedures to be carried out and Findings to be confirmed by the Auditor**
D. Productive hours XVI. The number of productive hours per full-time employee applied is *[delete as appropriate]*: A. 1720 productive hours per year for a person working full-time (corresponding pro-rata for persons not working full time). B. the total number of hours worked in the year by a person for the Beneficiary C. the standard number of annual hours generally applied by the beneficiary for its personnel in accordance with its usual cost accounting practices. This number must be at least 90% of the standard annual workable hours. <u>If method B is applied</u> XVII. The calculation of the total number of hours worked was done as follows: annual workable hours of the person according to the employment contract, applicable labour agreement or national law plus overtime worked minus absences (such as sick leave and special leave). XVIII. 'Annual workable hours' are hours during which the personnel must be working, at the employer's disposal and carrying out his/her activity or duties under the employment contract, applicable collective labour agreement or national working time legislation. XIX. The contract (applicable collective labour agreement or national working time legislation) do specify the working time enabling to calculate the annual workable hours. <u>If method C is applied</u> XX. The standard number of productive hours per year is that of a full-time equivalent. XXI. The number of productive hours per year on which the hourly rate is based i) corresponds to the Beneficiary's usual accounting practices; ii) is at least 90% of the standard number of workable (working) hours per year. XXII. Standard workable (working) hours are hours during which personnel are at	**Procedure (same sample basis as for Section C: Personnel costs):** ✓ The Auditor verified that the number of productive hours applied is in accordance with method A, B or C. ✓ The Auditor checked that the number of productive hours per full-time employee is correct. ✓ If method B is applied the Auditor verified i) the manner in which the total number of hours worked was done and ii) that the contract specified the annual workable hours by inspecting all the relevant documents, national legislation, labour agreements and contracts. ✓ If method C is applied the Auditor reviewed the manner in which the standard number of working hours per year has been calculated by inspecting all the relevant documents, national legislation, labour agreements and contracts and verified that the number of productive hours per year used for these calculations was at least 90% of the standard number of working hours per year. **Factual finding:** <u>General</u> 12. The Beneficiary applied a number of productive hours consistent with method A, B or C detailed in the left-hand column. 13. The number of productive hours per year per full-time employee was accurate. <u>If method B is applied</u> 14. The number of 'annual workable hours', overtime and absences was verifiable based on the documents provided by the Beneficiary and the calculation of the total number of hours worked was accurate. 15. The contract specified the working time enabling to calculate the annual workable hours. <u>If method C is applied</u> 16. The calculation of the number of productive hours per year corresponded to the usual costs accounting practice of the Beneficiary.

Please explain any discrepancies in the body of the Report.	
Statements to be made by Beneficiary	**Procedures to be carried out and Findings to be confirmed by the Auditor**
the Beneficiary's disposal preforming the duties described in the relevant employment contract, collective labour agreement or national labour legislation. The number of standard annual workable (working) hours that the Beneficiary claims is supported by labour contracts, national legislation and other documentary evidence. *[If certain statement(s) of section "D. Productive hours" cannot be endorsed by the Beneficiary they should be listed here below and reported as exception by the Auditor:* - *...]*	17. The calculation of the standard number of workable (working) hours per year was corroborated by the documents presented by the Beneficiary. 18. The number of productive hours per year used for the calculation of the hourly rate was at least 90 % of the number of workable (working) hours per year.
E. Hourly rates The hourly rates are correct because: XXIII. Hourly rates are correctly calculated since they result from dividing annual personnel costs by the productive hours of a given year and group (e.g. staff category or department or cost centre depending on the methodology applied) and they are in line with the statements made in section C. and D. above. *[If the statement of section 'E. Hourly rates' cannot be endorsed by the Beneficiary they should be listed here below and reported as exception by the Auditor:* - *...]*	**Procedure** ✓ The Auditor has obtained a list of all personnel rates calculated by the Beneficiary in accordance with the methodology used. ✓ The Auditor has obtained a list of all the relevant employees, based on which the personnel rate(s) are calculated. For 10 full-time equivalent employees selected at random (same sample basis as Section C: Personnel costs): ✓ The Auditor recalculated the hourly rates. ✓ The Auditor verified that the methodology applied corresponds to the usual accounting practices of the organisation and is applied consistently for all activities of the organisation on the basis of objective criteria irrespective of the source of funding. **Factual finding:** 19. No differences arose from the recalculation of the hourly rate for the employees included in the sample.
F. Time recording XXIV. Time recording is in place for all persons with no exclusive dedication to one Horizon 2020 action. At least all hours worked in connection with the grant agreement(s) are registered on a **daily/weekly/monthly** basis *[delete as appropriate]* using a **paper/computer-based system** *[delete as appropriate]*; XXV. For persons exclusively assigned to one Horizon 2020 activity the	**Procedure** ✓ The Auditor reviewed the brief description, all relevant manuals and/or internal guidance describing the methodology used to record time. The Auditor reviewed the time records of the random sample of 10 full-time equivalents referred to under Section C: Personnel costs, and verified in particular:

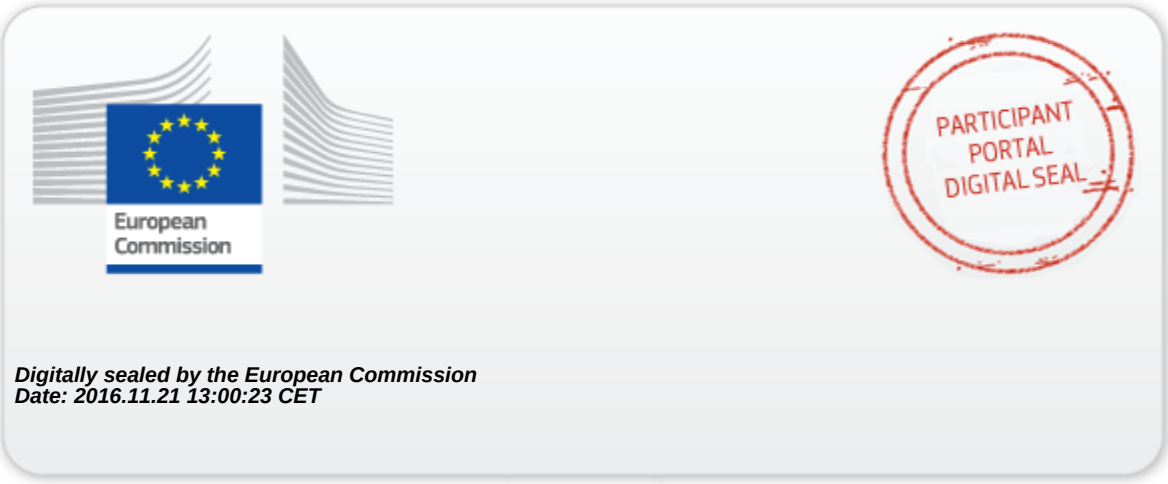
Please explain any discrepancies in the body of the Report.	
Statements to be made by Beneficiary	**Procedures to be carried out and Findings to be confirmed by the Auditor**
Beneficiary has either signed a declaration to that effect or has put arrangements in place to record their working time; XXVI. Records of time worked have been signed by the person concerned (on paper or electronically) and approved by the action manager or line manager at least monthly; XXVII. Measures are in place to prevent staff from: i. recording the same hours twice, ii. recording working hours during absence periods (e.g. holidays, sick leave), iii. recording more than the number of productive hours per year used to calculate the hourly rates, and iv. recording hours worked outside the action period. XXVIII. No working time was recorded outside the action period; XXIX. No more hours were claimed than the productive hours used to calculate the hourly personnel rates. *[Please provide a brief description of the time recording system in place together with the measures applied to ensure its reliability to the Auditor and annex it to the present certificate[1]].* *[If certain statement(s) of section "F. Time recording" cannot be endorsed by the Beneficiary they should be listed here below and reported as exception by the*	✓ that time records were available for all persons with not exclusive assignment to the action; ✓ that time records were available for persons working exclusively for a Horizon 2020 action, or, alternatively, that a declaration signed by the Beneficiary was available for them certifying that they were working exclusively for a Horizon 2020 action; ✓ that time records were signed and approved in due time and that all minimum requirements were fulfilled; ✓ that the persons worked for the action in the periods claimed; ✓ that no more hours were claimed than the productive hours used to calculate the hourly personnel rates; ✓ that internal controls were in place to prevent that time is recorded twice, during absences for holidays or sick leave; that more hours are claimed per person per year for Horizon 2020 actions than the number of productive hours per year used to calculate the hourly rates; that working time is recorded outside the action period; ✓ the Auditor cross-checked the information with human-resources records to verify consistency and to ensure that the internal controls have been effective. In addition, the Auditor has verified that no more hours were charged to Horizon 2020 actions per person per year than the number of productive hours per year used to calculate the hourly rates, and verified that no time worked outside the action period was charged to the action. **Factual finding:** 20. The brief description, manuals and/or internal guidance on time recording provided by the Beneficiary were consistent with management

[1] The description of the time recording system must state among others information on the content of the time records, its coverage (full or action time-recording, for all personnel or only for personnel involved in H2020 actions), its degree of detail (whether there is a reference to the particular tasks accomplished), its form, periodicity of the time registration and authorisation (paper or a computer-based system; on a daily, weekly or monthly basis; signed and countersigned by whom), controls applied to prevent double-charging of time or ensure consistency with HR-records such as absences and travels as well as it information flow up to its use for the preparation of the Financial Statements.

Please explain any discrepancies in the body of the Report.	
Statements to be made by Beneficiary	**Procedures to be carried out and Findings to be confirmed by the Auditor**
Auditor: - *...]*	reports/records and other documents reviewed and were generally applied by the Beneficiary to produce the financial statements. 21. For the random sample time was recorded or, in the case of employees working exclusively for the action, either a signed declaration or time records were available; 22. For the random sample the time records were signed by the employee and the action manager/line manager, at least monthly. 23. Working time claimed for the action occurred in the periods claimed; 24. No more hours were claimed than the number productive hours used to calculate the hourly personnel rates; 25. There is proof that the Beneficiary has checked that working time has not been claimed twice, that it is consistent with absence records and the number of productive hours per year, and that no working time has been claimed outside the action period. 26. Working time claimed is consistent with that on record at the human-resources department.

[official name of the** [Beneficiary] [Linked Third Party]**]
[name and title of authorised representative]
[dd Month yyyy]
*<**Signature of the** [Beneficiary] [Linked Third Party]>*

[official name of the Auditor]
[name and title of authorised representative]
[dd Month yyyy]
*<**Signature** of the Auditor>*



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