**CERTIFICATE ON THE FINANCIAL STATEMENT (CFS)**

*(To be filled out by the CFS practitioner (in line with the options applicable to the project according to the Data Sheet in the EU grant agreement), printed on their own letterhead and signed (on paper). The ToR need to be signed by both the participant and the practitioner). The AUP checklist and the report need to be signed by the practitioner. The scanned PDF should be submitted by the beneficiary through the Portal (both for themselves and their affiliated entities.)*

# TERMS OF REFERENCE

## 1. Background and subject matter

A certificate on the financial statements (CFS) must be provided for entities that participate as beneficiary or affiliated entities (‘participants’) in EU grants — provided that it is required under the EU grant agreement and that certain thresholds are met (see GA Data Sheet and Article 24.2 and [*AGA — Annotated Grant Agreement, art 24.2*](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/aga_en.pdf)).

The purpose of the CFS is to provide the EU granting authority with findings to be able to assess whether costs that are declared on the basis of actual costs or costs according to usual cost accounting practices (if any) and, if relevant, also revenues comply with the conditions set out in the EU grant agreement.

The present Terms of Reference set out the procedures to be performed, define the scope and applicable standards of the CFS and who may deliver it.

## 2. Scope and applicable standards

The CFS is a report on (factual) findings based on agreed-upon procedures (AUP).

The engagement is to perform **agreed-upon procedures (AUPs)** regarding the **eligibility** of the **costs** (and, if relevant, also revenues) declared under **grant agreement [insert project number] — [insert acronym]** (‘the Grant Agreement’). It is not an assurance engagement; the CFS practitioner does not provide an audit opinion, nor expresses assurance.

The following standards apply:

* the International Standard on Related Services (ISRS) 4400 (revised) *Agreed-upon Procedures Engagements* as issued by the International Auditing and Assurance Standards Board (IAASB)
* the *International Code of Ethics for Professional Accountants (including International Independent Standards)* issued by the International Ethics Standards Board for Accountants (IESBA), including the independence requirements
* the International Standard on Quality Control 1 *Quality Control for Firms that Perform Audits and Reviews of financial statements, and Other Assurance and Related Services Engagements* (or equivalent).

 Supreme audit institutions applying INTOSAI-standards may carry out the procedures according to the corresponding *International Standards of Supreme Audit Institutions (ISSAIs)* and *Code of Ethics* issued by INTOSAI instead of the International Standard on Related Services (ISRS) 4400 (revised) and the Code of Ethics for Professional Accountants issued by the IAASB and the IESBA.

The CFS must be issued according to the highest professional standards. The practitioner must comply with the present Terms of Reference, including the agreed-upon procedures checklist and report template — without modifying them. The work must be planned in a way that the engagement can be performed effectively. The practitioner must use the evidence obtained from the procedures performed as the basis for the report. Matters which are important for the findings and evidence that the work was carried out in accordance with the Terms of Reference must be documented. The findings must be described in sufficient detail and include the affected amounts, to allow the participant and the EU granting authority to ensure appropriate follow-up.

## 3. Practitioners who may deliver a certificate

The participant is free to choose a **qualified external auditor**, including its usual external auditor, provided that:

* the auditor is **independent** from the participant and
* the provisions of **Directive 2006/43/EC**[[1]](#footnote-2) (or similar standards) are complied with.

Although ISRS 4400 (revised) states that independence is not a requirement for engagements to carry out agreed-upon procedures, this is one of the qualities to ensure an unbiased approach and therefore required for CFS practitioners. Compliance with the IESBA Code’s independence requirements is therefore mandatory.

However:

* **public bodies** can choose an external auditor or a competent independent public officer. In this latter case, independence is usually defined as independence ‘in fact and in appearance’ *(e.g. that the officer is not involved in drawing up the financial statements)*. It is for each public body to appoint the public officer and ensure their independence. The certificate should refer to this appointment.
* **pillar-assessed entities** can choose their regular internal or external auditors in accordance with their internal financial regulations and procedures as assessed by the European Commission in accordance with Article 154(3) of Regulation 2018/1046[[2]](#footnote-3).

The **CFS costs** themselves can be charged to the EU project and the choice of practitioner therefore has to comply with the cost eligibility criteria, in particular lowest price or best value for money and no conflict of interest as set out in the Grant Agreement (for the detailed conditions, *see* [*AGA — Annotated Grant Agreement, art 6.2.C*](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/aga_en.pdf)*\**).

The CFS does not affect the granting authority’s right to carry out its own assessment or audit on the eligibility of the costs covered. Neither does it preclude the bodies mentioned in Article 25 of the Granting Agreement (e.g. granting authority, European Anti-Fraud Office (OLAF), European Public Prosecutor’s Office (EPPO), European Court of Auditors (ECA), etc) from exercising their rights under the Grant Agreement.

## 4. Procedures to be followed and expected results

The **procedures** to be carried out by the practitioner are listed in the agreed-upon procedures checklist below. The checklist is an integral part of these Terms of Reference.

The **engagement** should be undertaken on the basis of inquiry and analysis, (re)computation, comparison, other accuracy checks, observation, inspection of records and documents and by interviewing the participant (and the persons working for them) as described in the agreed-upon procedures.

The ‘result’ column in the checklist has three different options of findings:

* YES — means that the standard finding is confirmed and that no exception needs to be reported
* NO — means that the standard finding cannot be confirmed and that an exception needs to be reported (either because the practitioner carried out the procedures but cannot confirm the standard finding or because the practitioner 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. — means that the standard finding is ‘not applicable’ and that the procedure did not have to be carried out. The reasons for the non-application must be obvious, e.g. no cost was declared under a certain category; conditions for a certain procedure are not met, etc. For instance, for participants with accounts established in a currency other than the euro the procedure related to participants with accounts established in euro does not apply. Similarly, if no additional remuneration is paid, the standard finding(s) and procedure(s) for additional remuneration do not apply.

 The **reference document for the confirmation of standard findings** are the rules set out in the Grant Agreement, as explained in the [AGA — Annotated Grant Agreement](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/aga_en.pdf)\*. The agreed-upon procedures make reference to the relevant Grant Agreement provisions and cost categories, to enable the practitioner to find them easily.

*[OPTION:* **5. Other special terms**

[if needed, insert free text to add additional information depending on the specificities of each CFS (ex. confidentiality requirements), ensuring that it does not call into question the ToR, Grant Agreement or other applicable provisions)]*]*

SIGNATURES

For the practitioner For the participant

[forename/surname/function] [forename/surname/function]

[address]

[signature] [signature]

[date] [stamp] [date] [stamp]

# CFS AGREED-UPON PROCEDURES CHECKLIST

### General eligibility conditions and ineligible cost

|  |
| --- |
| **CFS AGREED-UPON PROCEDURES — General eligibility conditions and ineligible costs** |
| **Grant Agreement Article** | **Cost Category** | **Procedures** | **Standard Finding** |
| **Article 6.1, 6.3** | **GENERAL ELIGIBILITY CONDITIONS AND INELIGIBLE COSTS** |
| **Article 6.1 and 6.3** | **GENERAL ELIGIBILITY CONDITIONS AND INELIGIBLE COSTS** | ***For all cost categories***:For the sample of each cost category, the practitioner checked that the costs declared in the financial statements fulfil the following general eligibility conditions for actual costs:* The costs are identifiable and verifiable, in particular recorded in the participant's accounts in accordance with the accounting standards applicable in the country where the participant is established and with the participant's usual cost accounting practices (i.e. used consistently by the participant for all similar activities, not just for the EU action, except for modifications required to comply with rules under the Grant Agreement).
* The costs are actually incurred by the participant (proof of payment, no re-invoicing to other entities).
* The costs are incurred in the period set out in art. 4 (with the exception of costs relating to the submission of the final periodic report, which may be incurred afterwards; *see art. 21 GA and the corresponding* [*AGA — Annotated Grant Agreement*](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/aga_en.pdf)*\* section*).
* The costs are declared under the correct budget category set out in art. 6.2 and Annex 2.
* The costs are incurred in connection with the action (i.e. a direct link between the cost and the action activities as described in the description of the action (Annex 1 GA) can be established in the accounting system or other supporting documents).
* The costs comply with the applicable (national) law *(e.g. on taxes, labour and social security)*.
* The cost do not contain any ineligible elements (listed in art. 6.3; *e.g.cost declared under other EU grants (‘double-funding’), or excessive or reckless expenditure*).

‘Excessive’ means paying significantly (25%) more for products, services or personnel than the prevailing market rates or the usual practices of the participant (and thus resulting in an avoidable financial loss to the action). ‘Reckless’ means failing to exercise care in the selection of products, services or personnel (and thus resulting in an avoidable financial loss to the action (25%)).‘Double-funding’ means that costs or contributions cannot be declared under other EU grants (or grants awarded by an EU Member State, non-EU country or other body implementing the EU budget) except where the Grant Agreement explicitly provides for synergy actions (art. 6.3(b)). | *The standard finding for this procedure is included as first finding in each cost category (see below):**“The costs were eligible (no ineligible components), identifiable and verifiable, linked to the action and incurred by the participant (proof of payment, no re-invoicing to other entities) during the duration of the action in accordance with its usual cost accounting practices.”* |

### Personnel costs (A.1-A.6)

| **CFS AGREED-UPON PROCEDURES — Personnel costs (A.1-A.6)** |
| --- |
| **Grant Agreement Article** | **Cost Category** | **Procedures** | **Standard Finding** | **Result****(YES/NO/N.A.)** |
| **Article 6.2.A** | **A.** | **PERSONNEL COSTS** |
| **Article 6.2.A** | **A. PERSONNEL COSTS** | ***The practitioner draws a sample to carry out the procedures under this cost category. The sample should be selected randomly. It should cover 10% of all persons for which costs were declared, with a minimum sample of 10 persons (or all persons if less than 10 worked on the action).***The practitioner sampled \_\_\_\_\_ persons out of a total of \_\_\_\_\_. |  |
| **Article 6.2.A.1** | **A.1** | **EMPLOYEES OR EQUIVALENT**  |
| **Article 6.2.A.1** | **A.1 EMPLOYEES OR EQUIVALENT***(all programmes except SMP ESS, CUST/FISC)***A.1 If standard (Case 1A):** | ***For the persons included in the sample and working under an employment contract or equivalent appointing act:***The practitioner carried out the general checks for eligibility and ineligibility of costs *(see above)*.Actual personnel cost for employees (or equivalent) are to be calculated in accordance with the formula set out in art 6.2.A.1 GA and the corresponding [AGA — Annotated Grant Agreement](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/aga_en.pdf)\* section.It is the task of the practitioner to check that the elements for the calculation of actual personnel cost declared to the granting authority are correct and in compliance with the rules and that the formula has been correctly applied. The elements to be checked are:* actual personnel cost incurred, including any eligible components and excluding any ineligible components
* number of months of employment during the reporting period, used for the calculation of the maximum declarable-day equivalents
* working-time factor, used for the calculation of the maximum declarable-day equivalents
* number of day-equivalents worked for the action, as recorded in the monthly declaration or another reliable time recording system (correctly converted using one of the accepted formulas, *see art. 20 GA and the corresponding* [*AGA — Annotated Grant Agreement*](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/aga_en.pdf)*\* section*)

To confirm the standard findings in the next column, the practitioner checked the following information/documents provided by the participant:* 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 (or other document proving the working-time factor)
* the payslips of the employees included in the sample as well as documents providing proof of payment (checked at least two salary payments per person per year);information concerning the employment status and employment conditions of personnel included in the sample, in particular their employment contracts or equivalent
* the participant's usual policy regarding payroll matters (*e.g. salary policy, overtime policy, variable pay/bonuses)*
* applicable national law on taxes, labour and social security
* monthly declarations/ time records of the employees included in the sample and
* any other document that supports the personnel costs declared.

The practitioner also checked the eligibility of all components *(see art. 6)* and recalculated the personnel costs for employees declared in the financial statement(s) through reapplication of the personnel cost formula with the data from the accounting system (project accounting and general ledger), payroll system, time recording system and supporting documents proving the working time factor. | 1. The cost used for the calculation of the daily rate were eligible (no ineligible components), identifiable and verifiable, linked to the action and incurred by the participant (proof of payment, no re-invoicing to other entities) during the duration of the action in accordance with its usual cost accounting practices.
 | YES/NO/N.A. |
| 1. The persons worked for the participant on the basis of an employment contract or equivalent appointing act.
 | YES/NO/N.A. |
| 1. The persons were i) directly hired by the participant in accordance with its national legislation, ii) under the participant's sole technical supervision and responsibility and iii) remunerated in accordance with the participant's usual practices.
 | YES/NO/N.A. |
| 1. The persons’ employment time during the action corresponds to the number of months used for the calculations of the maximum declarable-day equivalents.
 | YES/NO/N.A. |
| 1. The persons’ working-time factor(s) corresponds to the factor(s) used for the calculation of the maximum declarable-day equivalents.
 | YES/NO/N.A. |
| 1. The persons were assigned to the action according to the monthly declaration of day-equivalents worked in the action, or internal written instructions, organisation chart or other documented management decision.
 | YES/NO/N.A. |
| 1. The maximum declarable day-equivalents for the person have been correctly calculated according to the following formula (or as adapted for specific cases, see art 6.2.A.1 GA and the corresponding [AGA — Annotated Grant Agreement](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/aga_en.pdf)\* section).
 | YES/NO/N.A. |
| 1. The maximum declarable day-equivalents used for the calculation of the personnel cost are correctly rounded (up or down to the nearest half day-equivalent).
 | YES/NO/N.A. |
| 1. Daily rate was correctly calculated (actual personnel costs during the months within the reporting period divided by maximum declarable day-equivalents).
 | YES/NO/N.A. |
| 1. Day-equivalents worked on the action were recorded in a monthly declaration, signed by the person and their supervisor, or were recorded in another reliable time-record system.
 | YES/NO/N.A. |
| 1. If another reliable time-record system was used, time worked on the action has been correctly converted into day-equivalents according to one of the accepted formulas *(see art. 20 GA and the corresponding* [*AGA — Annotated Grant Agreement*](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/aga_en.pdf)*\* section)*.
 | YES/NO/N.A. |
| 1. Personnel cost declared for the persons for each reporting period were correctly calculated ({day-equivalents worked} x {daily rate}).
 | YES/NO/N.A. |
| 1. If any, cost declared under specific cases *(e.g. for HE, HUMA: parental leave)* were correctly calculated and in accordance with art 6.2.A.1 GA and the corresponding [AGA — Annotated Grant Agreement](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/aga_en.pdf)\* section.
 | YES/NO/N.A. |
| 1. There were no discrepancies between the personnel costs charged to the action and the costs recalculated by the practitioner in accordance with the formula.
 | YES/NO/N.A. |
|  | **A.1 If project-based re-muneration(Case 1B):***(option in HE)* | **Additional procedures if ‘project-based remuneration’ is paid:*****For the persons included in the sample whose level of remuneration (daily rate, hourly rate) increases when and because they work in (EU, national or other) projects:***Apart from carrying out the procedures indicated above, to confirm the standard findings in the next column, the practitioner:* checked relevant documents provided by the participant (employment contract or project-based contract, collective agreement, the participant’s usual policy on remuneration, criteria used for its calculation, the participant’s usual remuneration practice for projects funded under national funding schemes
* recalculated the action daily rate per person as follows: {actual personnel costs for work on the action (incl. project-based supplementary payments, bonuses, increased salary, etc) during the months within the reporting period} divided by {day-equivalents worked by the person on the action during the months within the reporting period}
* recalculated the (theoretical) national project daily rate as follows: {theoretical personnel costs for similar work in a national project over the same number of months as the reporting period} divided by {maximum declarable day-equivalents}
* compared the action daily rate with the national project daily rate; the daily rate to be used for the EU grant financial statement will be the lower of the two
* checked documents providing proof of payment (checked at least two salary payments per person per year).

The maximum declarable day-equivalents for each reporting period are calculated as follows:(215 / 12) multiplied by the number of months [during which the person is employed] within the reporting period) multiplied by the working time factor [*e.g. 1 for full-time, 0,5 for 50% part time etc*].cid:image002.png@01D0B99B.7C10A740 If there are no regulatory requirements and the participant does not have internal rules defining objective conditions on which the national project daily rate can be determined, but it can demonstrate that its usual practice is to pay bonuses for work in national projects, the national project daily rate is the average of the remuneration that the person received in the last complete year (calendar, financial or fiscal year) before the end of the reporting period for work in national projects calculated as follows:{(total personnel costs of the person in the last complete year) minus (remuneration paid for EU actions during that complete year)}divided by{215 minus (days worked in EU actions during that complete year)}‘EU actions’ are ‘EU grants’ as defined in the Grant Agreement (i.e. awarded by EU institutions, bodies, offices or agencies, including EU executive agencies, EU regulatory agencies, EDA, joint undertakings).‘Total personnel costs’ covers all types of contracts with the person that qualify as personnel costs under art. 6.2.A. | 1. The amount of project-based remuneration paid corresponded to the participant’s usual remuneration practices and was consistently paid whenever the same kind of work or expertise was required.
 | YES/NO/N.A. |
| 1. The criteria used to calculate the project-based remuneration were objective and generally applied by the participants regardless of the source of funding used.
 | YES/NO/N.A. |
| 1. The daily rate to be used for the EU Grant’ financial statements is the lower of the action daily rate and the national project daily rate.
 | YES/NO/N.A. |
|  | **A.1 If average personnel costs (unit costs calculated in accordance with usual cost accounting practices) (Case 2):***(option in HE, DEP, EDF, CEF, HUMA)* | **Additional procedures in case ‘average personnel costs’ is used:*****For the persons included in the sample:***Apart from carrying out the procedures indicated above, the practitioner carried out following procedures to confirm standard findings in the next column:* obtained a description of the participant’s usual cost accounting practice to calculate unit costs
* checked whether the participant’s usual cost accounting practice was applied for the financial statements subject of the present CFS
* checked that the employees included in the sample were charged under the correct category (in accordance with the criteria used by the participant to establish personnel categories) by reviewing the contract/HR-record or analytical accounting records
* checked 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
* checked documents providing proof of payment (checked at least two salary payments per person per year)
* checked whether actual personnel costs were adjusted on the basis of budgeted or estimated elements and, if so, examined whether those elements used are actually relevant for the calculation, objective and supported by documents.
 | 1. The personnel costs included in the financial statement were calculated in accordance with the participant's usual cost accounting practice, using the actual personnel costs recorded in the participant’s accounts and excluding ineligible costs or costs already included in other budget categories and were applied in consistent manner, based on objective criteria, regardless of the source of funding.
 | YES/NO/N.A. |
| 1. The employees were charged under the correct category.
 | YES/NO/N.A. |
| 1. Total personnel costs used in calculating the unit costs were consistent with the expenses recorded in the statutory accounts and excluded any ineligible costs or costs included in other budget categories.
 | YES/NO/N.A. |
| 1. Any estimated or budgeted element used by the participant in its unit-cost calculation were relevant for calculating personnel costs, used in a reasonable way (i.e. do not play a major role in calculating the hourly rate) and corresponded to objective and verifiable information. If the budgeted or estimated figures represent less than 5% of the declared unit cost, it is considered that they do not play a major role and can be accepted. If the budgeted or estimated component is higher than 5%, then it needs to be compared with the actual costs.
 | YES/NO/N.A. |
| **Article 6.2.A.2.** | **A.2** | **NATURAL PERSONS WITH A DIRECT CONTRACT**[[3]](#footnote-4) |
| **Article 6.2.A.2** | **A2. NATURAL PERSONS WITH DIRECT CONTRACT** | ***For natural persons included in the sample and working with the participant under a direct contract other than an employment contract, such as consultants (not subcontractors):***The practitioner carried out the general checks for eligibility and ineligibility of costs *(see above)*.To confirm standard findings in the next column, the practitioner checked following information/documents provided by the participant:* the contracts, especially the cost, contract duration, work description, place of work, ownership of the results and reporting obligations to the participant
* the employment conditions of staff in the same category to compare costs
* monthly declarations/ other reliable time records of the natural persons included in the sample and
* any other document that supports the costs declared and its registration *(e.g. invoices, accounting records, proof of payment,etc)*.
 | 1. The cost were eligible (no ineligible components), identifiable and verifiable, linked to the action and incurred by the participant (proof of payment, no re-invoicing to other entities) during the duration of the action in accordance with its usual cost accounting practices.
 | YES/NO/N.A. |
| 1. The persons worked for the participant as a self-employed natural person *(e.g. some types of in-house consultants)* under a direct contract or a contract signed between the participant and a legal entity fully owned by the person (with no other employees).
 | YES/NO/N.A. |
| 1. The persons worked under conditions similar to those of an employee (including regarding teleworking arrangements / presence requirements at the premises).
 | YES/NO/N.A. |
| 1. The cost of the persons were not significantly different from costs for employees of the participant performing similar tasks (up to 50% can be accepted in relation to the average daily rate of employees performing similar tasks, or 25% in relation to the highest daily rate of employees performing similar tasks (which ever of the two amounts is the lowest).
 | YES/NO/N.A. |
| 1. The results of work carried out belong to the participant, or, if not, the participant has obtained all necessary rights to fulfil its obligations as if those results were generated by itself *(e.g. through obtaining adequate licences)*.
 | YES/NO/N.A. |
| 1. The person was assigned to the action according to internal written instructions, organisation chart or other documented management decision.
 | YES/NO/N.A. |
| 1. Day-equivalents worked on the action were recorded in a monthly declaration, signed by the person and their supervisor, or were recorded in another reliable time-record system.
 | YES/NO/N.A. |
| 1. Time worked on the action has been converted into day-equivalents.
 | YES/NO/N.A. |
| 1. The cost used for the calculation of the daily rate for the person do not include ineligible cost.
 | YES/NO/N.A. |
| 1. the daily rate has been calculated with one of the following 3 alternatives:
* If the contract specifies a fixed daily rate, this rate must be used. In case an hourly rate is set instead of a daily, multiply the hourly rate X 8
* -If the contract states a fixed amount of work and a fixed amount of days/hours, the global amount for the work must be divided by the number of day-equivalents. If hours are mentioned, convert into equivalent days by X 8
* If the contract states a fixed amount for the work but does not specify the daily or hourly rate or total amount of days or hours to be worked, the global amount for the work must be divided by the pro-rata of 215 corresponding to the duration of the contract.
 | YES/NO/N.A. |
| 1. Personnel cost declared for the person for each reporting period were correctly calculated ({day-equivalents worked (rounded up or down to the nearest half-day)} x {daily rate}).
 | YES/NO/N.A. |
| 1. If a number of day equivalents is used in the calculation of the amount per ‘unit’ (daily rate), the participant has not declared more day-equivalents worked on the action than the number of day-equivalents used to calculate the daily rate (consistency with the denominator).
 | YES/NO/N.A. |
| **Article 6.2.A.3** | **A.3** | **SECONDED PERSONS BY A THIRD PARTY AGAINST PAYMENT** |
| **Article 6.2.A.3** | **A.3 SECONDED PERSONS** | ***For persons included in the sample and seconded by a third party against payment (not subcontractors):***The practitioner carried out the general checks for eligibility and ineligibility of costs *(see above)*.To confirm standard findings in the next column, the practitioner checked following information/documents provided by the participant:* their secondment contract(s) notably regarding costs, duration, work description, place of work and ownership of the results
* for the reimbursement by the participant to the third party for the resource made available (seconded personnel 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 (i.e. that the daily rate paid by the participant is not higher than the daily rate actually paid by the third party to the seconded person, applying the calculation rules of the Grant Agreement)
* any other document that supports the costs declared *(e.g. invoices, etc)* and proof of payment.

Normally, the practitioner should consider cost difference compared with staff who performed similar tasks under an employment contract with the participant as significant if they are 50% or more above the average daily rate of employees performing similar tasks, or 25% or more above the highest daily rate of employees performing similar tasks (which ever of the two amounts is lower). However, in the specific case of persons seconded against payment from a third party located in a different country than the participant’s one, the costs can be higher than 50% in relation to the average daily rate of employees performing similar, or higher than 25% in relation to the highest daily rate of employees performing similar tasks (whichever is the lower), if the participant can demonstrate that its usual practice is to pay for secondments at the level of the actual remuneration of the seconded person. | 1. The cost were eligible (no ineligible components), identifiable and verifiable, linked to the action and incurred by the participant (proof of payment, no re-invoicing to other entities) during the duration of the action in accordance with its usual cost accounting practices.
 | YES/NO/N.A. |
| 1. Seconded personnel are covered by a secondment agreement between the participant and the employer of the seconded person, the seconded personnel reported to the participant’s and worked on the participant’s premises (unless otherwise agreed with the participant).
 | YES/NO/N.A. |
| 1. The results of work carried out belong to the participant, or, if not, the participant has obtained all necessary rights to fulfil its obligations as if those results were generated by itself *(e.g. through obtaining adequate licences)*.
 | YES/NO/N.A. |
| 1. Their costs were not significantly different from those for staff who performed similar tasks under an employment contract with the participant (or differences are justified under the specific case of secondment from other countries).
 | YES/NO/N.A. |
| 1. The costs declared were supported with documentation and recorded in the participant’s accounts.
 | YES/NO/N.A. |
| 1. The secondment did not entail any profit in the calculation of personnel cost for the seconded person (neither for the participant nor for the seconding third party).
 | YES/NO/N.A. |
| **Article 6.2.A.4** | **A.4** | **SME OWNERS AND NATURAL PERSON BENEFICIARIES** *(all programmes except SMP ESS, EUAF, CUST/FISC, CCEI, PERI)* |
| N/A |
| **Article 6.2.A.5** | **A.5** | **VOLUNTEERS** *(ERDF-TA, LIFE, ERASMUS, CREA, CERV, JUST, ESF/SOCPL, AMIF/ISF/BMVI, UCPM)* |
| N/A |

### Subcontracting costs (B.)

| **CFS AGREED-UPON PROCEDURES — Subcontracting costs (B.)** |
| --- |
| **Grant Agreement Article**  | **Cost Category** | **Procedures** | **Standard Finding** | **Result****(YES/NO/N.A.)** |
| **Article 6.2.B** | **B.** | **SUBCONTRACTING COSTS** |
| **Article 6.2.B** | **B. SUBCONTRACTING** | ***The practitioner draws a sample to carry out the procedures under this cost category.* *The sample should be selected randomly. It should cover 10% of all subcontracts for which costs were declared, with a minimum sample of 10 subcontracts (or all if less than 10 subcontracts were declared).***The practitioner sampled \_\_\_\_\_ subcontracts out of a total of \_\_\_\_\_. |  |  |
| ***For the subcontracts included in the sample:***The practitioner carried out the general checks for eligibility and ineligibility of costs *(see above)*.To confirm the standard findings in the next column, the practitioner checked that:* the use of subcontractors was foreseen in Annex 1 GA (or declared following the ‘simplified approval’ procedure if allowed by the Grant Agreement; *see art. 6.2.B*)
* the total estimated costs of subcontracting are set out in Annex 2 GA (or declared following the ‘simplified approval’ procedure if allowed by the Grant Agreement; *see art. 6.2.B*)
* subcontracting costs were declared in the subcontracting category of the financial statement
* subcontracting costs declared in the financial statements are reconciled with the data in the accounting system
* costs claimed can be traced to underlying bank statements showing amount paid and date of payment by the participant
* there are supporting documents proving that the selection and award procedure were based on the usual purchase practices of the participantand, if applicable, national law on public procurement
* the subcontracts were awarded using the participant’susual purchasing practices/internal procedures, that these ensure best value for money (or if appropriate the lowest price) and that there are procedures in place to ensure the absence of conflict of interests by:
	+ reviewing the subcontract award process, including, bid evaluation, and selection process to ensure that the award corresponded to the evaluation in accordance with the requirements set out for the subcontract and that the participants staff involved in the award procedure were subject to conflict of interest rules *(e.g. requiring them to declare conflict of interests)*
	+ reviewing the qualifications of the subcontractor: to ensure that they correspond to the requirements set out for the subcontract
	+ reviewing the subcontract to ensure that it contains conflict of interest provisions *(e.g. requirements for the subcontractor to disclose any conflicts of interest)*
	+ receiving a written confirmation from the participant that subcontracts were awarded in accordance with the principle of best value of money and no conflict of interest.

For participants that are ‘contracting authorities/entities’ within the meaning of the EU Public Procurement Directives 2014/24/EU, 2014/25/EU or 2009/81/EC, the practitioner verified that the subcontracting complied with the applicable national law on public procurement.The practitioner also examined the subcontracts to identify that the participant’s contractual obligations under the Grant Agreement are also imposed on subcontractors (art. 9.3 GA):* proper implementation
* conflict of interest
* confidentiality and security
* ethics and values
* visibility
* other specific rules for carrying out the action
* information obligations
* record keeping
* checks, reviews, audits, investigation rights of the granting authority, OLAF, ECA and EPPO.

In addition, the practitioner also checked that:* there were signed agreements between the participant and the subcontractor
* the subcontracts were not awarded to other participants or to affiliates, unless they have a framework contract or the affiliate is their usual provider, and the subcontract is priced at market conditions
* there was evidence that the services were provided by subcontractor.

In the case of framework contracts, the practitioner checked that the selection of the provider was done in line with the usual practice of the participant and awarded on the basis of best-value-for-money or lowest price and absence of conflict of interest. The framework contract does not necessarily have to be concluded before the start of the action. | 1. The cost were eligible (no ineligible components), identifiable and verifiable, linked to the action and incurred by the participant (proof of payment, no re-invoicing to other entities) during the duration of the action in accordance with its usual cost accounting practices.
 | YES/NO/N.A. |
| 1. The subcontracts were not made between participants (unless in line with specific cases set out in the [AGA — Annotated Grant Agreement, art. 6.2.B](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/aga_en.pdf)\*)
 | YES/NO/N.A. |
| 1. The use of subcontracting was foreseen in Annex 1 GA and the total estimated costs of subcontracting were set out in Annex 2 GA (or use and cost were declared following the ‘simplified approval’ procedure if allowed by the Grant Agreement; *see art. 6.2.B*) and costs were declared in the financial statements under the subcontracting category.
 | YES/NO/N.A. |
| 1. Subcontracts were awarded using the participant’s usual purchasing practices and, if applicable, other documents/procedures required for compliance with national law on public procurement.
 | YES/NO/N.A. |
| 1. Subcontracts were awarded according to the principle of best value for money (best price-quality ratio) or the lowest price. If an existing contract, a framework contract or a usual provider is used, the participant provided proof *(e.g. documents of requests to different providers, different offers, proof of assessment of offers and/or assessment of market prices)* demonstrating that the original selection fulfilled these criteria
 | YES/NO/N.A. |
| 1. The participant applied procedures to ensure the absence of conflict of interest and based on our examination nothing came to our attention that could indicate a potential conflict of interest. The participant has provided the required written confirmation. If an existing contract, a framework contract or a usual provider was used, the participant provided proof *(e.g. requests to different providers, proof of assessment of offers and/or assessment of market prices)* demonstrating that the original selection fulfilled these criteria.
 | YES/NO/N.A. |
| 1. the subcontracts ensure that the contractual obligations set out in art. 9.3 are also imposed on the subcontractor.
 | YES/NO/N.A. |
| 1. The subcontracts were not awarded to other participants of the consortium or affiliated entities.
 | YES/NO/N.A. |
| 1. All subcontracts were supported by signed agreements between the participant and the subcontractor.
 | YES/NO/N.A. |
| 1. There was evidence that the services were provided by the subcontractors.
 | YES/NO/N.A. |

### Purchase costs (C.)

| **CFS AGREED-UPON PROCEDURES — Purchase costs (C.)** |
| --- |
| **Grant Agreement Article** | **Cost Category** | **Procedures** | **Standard Finding** |
| **Article 6.2.C** | **C.** | **PURCHASE COSTS** |
| **Article 6.2.C** | **GENERAL ELIGIBILITY CONDITIONS FOR PURCHASE COSTS** | ***For all purchase cost categories***:For the sample of each purchase cost category, the practitioner checked that the costs declared in the financial statements fulfil the following eligibility conditions for purchase costs:* The purchases were made in conformity with the participant’s usual purchasing practices/internal procedures — provided these ensure purchases with 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), or if appropriate the lowest price, and that there are procedures in place to ensure the absence of conflict of interests. If an existing contract, a framework contract or a usual provider is used, the participant provided proof *(e.g. requests to different providers, proof of assessment of offers and/or assessment of market prices)* demonstrating that the original selection fulfilled these criteria.
* The practitioner received written confirmation from the participant that purchases were made in accordance with the principle of best value of money and no conflict of interest.
* For participants that are ‘contracting authorities/entities’ within the meaning of the EU Public Procurement Directives 2014/24/EU, 2014/25/EU or 2009/81/EC, the practitioner verified that the procurement complied with the applicable national law on public procurement.
 | *The standard finding for this procedure is included as first finding in each cost category (see below):** *“Purchases were made using the participant’s usual purchasing practices and, if applicable, other documents/procedures required for compliance with national law on public procurement.*
* *Purchases were made according to the principle of best value for money (best price-quality ratio) or the lowest price.*
* *The participant applied procedures to ensure the absence of conflict of interest and based on our examination nothing came to our attention that could indicate a potential conflict of interest. The participant has provided the required written confirmation.”*
 |

### Travel and subsistence (C.1)

| **CFS AGREED-UPON PROCEDURES — Travel and subsistence costs (C.1)** |
| --- |
| **Grant Agreement Article** | **Cost Category** | **Procedures** | **Standard Finding** | **Result****(YES/NO/N.A.)** |
| **Article 6.2.C.1** | **C.1** | **TRAVEL AND SUBSISTENCE COSTS** |
| **Article 6.2.C.1** | **C.1 TRAVEL AND SUBSISTENCE***(all programmes except RFCS, CCEI)***C.1 If actual costs:***(HE, DEP, EDF, CEF, LIFE, AGRIP, HUMA)* | ***The practitioner draws a sample to carry out the procedures under this cost category.* *The sample should be selected randomly. It should cover 10% of all travel instances (related cost for transport, accommodation and subsistence are together counted as one instance) for which costs were declared, with a minimum sample of 10 travels (or all if less than 10 travels were declared).***The practitioner sampled \_\_\_\_\_ travels out of a total of \_\_\_\_\_. |  |
| ***For the travels included in the sample:***The practitioner carried out the general checks for eligibility and ineligibility of costs *(see above)*.The practitioner carried out the general checks for eligibility of purchase costs *(see above)*.To confirm standard findings in the next column, the practitioner reviewed the sample and checked that:* travel and subsistence costs were consistent with the participant’s usual policy for travel. In this context, the participant provided evidence of its normal policy for travel costs *(e.g. use of first class tickets, reimbursement by the participant on the basis of actual costs, a per diem, carbon offsetting contributions)* to enable the practitioner to compare the travel costs charged with this policy.
* for cases of combined travel, the participant kept evidence not only of the actual cost of the subsequent travel leg(s), but also of the cost of the theoretical direct return travel after the end of the work for the action.
* travel costs are identified and allocated to the action *(e.g. trips are directly linked to the action, during the action period, etc)* by examining 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.
 | 1. The cost were eligible (no ineligible components), identifiable and verifiable, linked to the action and incurred by the participant (proof of payment, no re-invoicing to other entities) during the duration of the action in accordance with its usual cost accounting practices.
 | YES/NO/N.A. |
| 1. Purchases were made using the participant’s usual purchasing practices and, if applicable, other documents/procedures required for compliance with national law on public procurement.
 | YES/NO/N.A. |
| 1. Purchases were made according to the principle of best value for money (best price-quality ratio) or the lowest price.
 | YES/NO/N.A. |
| 1. The participant applied procedures to ensure the absence of conflict of interest and based on our examination nothing came to our attention that could indicate a potential conflict of interest. The participant has provided the required written confirmation.
 | YES/NO/N.A. |
| 1. Costs were incurred, approved and reimbursed in line with the participant’s usual policy for travels.
 | YES/NO/N.A. |
| 1. There was a link between the trip and the action.
 | YES/NO/N.A. |
| 1. The supporting documents were consistent with each other regarding subject of the trip, dates, duration and reconciled with monthly declaration of time worked on the action / other reliable time records and accounting.
 | YES/NO/N.A. |
| 1. The supporting documents are addressed to the participant.
 | YES/NO/N.A. |
| 1. Costs of a combined travel were charged to the action only up to the cost that would have been incurred if the travel would have been made exclusively (proven by records) for the action and allowing combined travel is the usual practice of the participant.
 | YES/NO/N.A. |
|  | **C.1 If unit costs:***(most programmes, e.g. I3, ERDF-TA, IMREG, EMFAF, IMCAP, SMP, ERASMUS, CREA, CERV, JUST, ESF/SOCPL, EU4H, AMIF/ISF/BMVI, EUAF, CUST/FISC, PERI (partial), TSI, UCPM)* | N/A |

### Equipment (C.2)

| **CFS AGREED-UPON PROCEDURES — Equipment costs (C.2)** |
| --- |
| **Grant Agreement Article** | **Cost Category** | **Procedures** | **Standard Finding** | **Result****(YES/NO/N.A.)** |
| **Article 6.2.C.2** | **C.2** | **EQUIPMENT COSTS** |
| **Article 6.2.C.2** | **C.2 EQUIPMENT** | ***The practitioner draws a sample to carry out the procedures under this cost category.* *The sample should be selected randomly. It should cover 10% of all items for which costs were declared, with a minimum sample of 10 items (or all if less than 10 items were declared).***The practitioner sampled \_\_\_\_\_ items out of a total of \_\_\_\_\_. |  |
| **C.2 If depreciation only:***(default option for most programmes)* | ***For the equipment included in the sample:***The practitioner carried out the general checks for eligibility and ineligibility of costs *(see above)*.The practitioner carried out the general checks for eligibility of purchase costs *(see above)*.To confirm the standard findings in the next column for purchases of equipment, infrastructure or other assets used for the action (‘equipment’), the practitioner checked that:* they were entered in the accounting system and written off in accordance with the participant’s usual accounting practices and with international accounting standards; they were correctly allocated to the action (with supporting documents such as delivery note invoice or any other proof demonstrating the link to the action)
* the extent to which the equipment was used for the action (as a percentage) was supported by reliable documentation *(e.g. usage overview table)*
* any costs reductions (rebates, discounts) have been taken into account
* confirmed the existence of the equipment and ensured that is the same equipment purchased
* if the action was suspended, that no depreciation costs were charged during the suspension period.

Purchases between participants are in principle not accepted, unless in exceptional and properly justified cases *(e.g. participant A is the usual supplier of participant B for a generic consumable that participant B needs for the action)*. If a participant needs supplies from another participant, it is the latter participant that should charge them to the action as cost.The practitioner recalculated the depreciation costs and checked that:* the depreciation is calculated on the acquisition value
* the depreciation costs were accumulated during the action duration
* the depreciation costs were calculated for each reporting period according to the rate of use for the project (if the participant does not use the equipment exclusively for the action, only the portion used on the action may be charged)
* the participant did not charge depreciation from a date before reception of the equipment. Eligible depreciation of an equipment begins when it is available for use in the action
* the depreciation costs do not exceed the equipment purchase price. The depreciable amount (purchase price) of the equipment must be allocated on a systematic basis over its useful life (i.e. the period during which the equipment is expected to be usable). If the equipment’s useful life is more than a year, the participant cannot charge the total cost of the item in a single year unless the Grant Agreement explicitly foresees that option.

Apart from depreciation costs, costs for renting or leasing equipment, infrastructure or other assets, are also eligible as equipment costs if they do not exceed the depreciation costs of similar equipment, infrastructure or assets and do not include any financing fees. If the equipment was not purchased but rented or leased, the practitioner should also check that the costs:* do not exceed the depreciation costs of similar equipment, infrastructure or assets
* do not include any financing fees *(e.g. finance charges included in the finance lease payments or interests on loans taken to finance the purchase)*
* there is no double charging of costs *(e.g. no charging of depreciation costs for equipment previously funded at full cost by an EU grant)*.
 | 1. The cost were eligible (no ineligible components), identifiable and verifiable, linked to the action and incurred by the participant (proof of payment, no re-invoicing to other entities) during the duration of the action in accordance with its usual cost accounting practices.
 | YES/NO/N.A. |
| 1. Purchases were made using the participant’s usual purchasing practices and, if applicable, other documents/procedures required for compliance with national law on public procurement.
 | YES/NO/N.A. |
| 1. Assets were purchased according to the principle of best value for money (best price-quality ratio) or the lowest price.
 | YES/NO/N.A. |
| 1. The participant applied procedures to ensure the absence of conflict of interest and based on our examination nothing came to our attention that could indicate a potential conflict of interest. The participant has provided the required written confirmation.
 | YES/NO/N.A. |
| 1. There was a link between the Grant Agreement and the equipment charged to the action.
 | YES/NO/N.A. |
| 1. The equipment charged to the action was physically inspected and traceable to the accounting records and the underlying documents.
 | YES/NO/N.A. |
| 1. The purchases were not made between participants (unless in line with specific cases set out in the [AGA — Annotated Grant Agreement, art 6.2.B and 6.2.C](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/aga_en.pdf)\*).
 | YES/NO/N.A. |
| 1. The depreciation costs were calculated in line with applicable audit standards and the participant’s usual accounting practices (normally at the earliest as of the reception of the equipment and its availability for use), for each reporting period.
 | YES/NO/N.A. |
| 1. The amount charged corresponded to the rate of actual usage for the action.
 | YES/NO/N.A. |
| 1. Costs for renting or leasing equipment do not exceed the depreciation costs of similar equipment, do not include any financing fees and there is no double charging of costs.
 | YES/NO/N.A. |
|  |  |
|  | **C.2 If full cost only:***(option in HE, RFCS, DEP, EDF, SMP, EU4H, EUAF, UCPM; mandatory in CEF, CCEI, HUMA)* | ***For the equipment included in the sample:***The practitioner carried out the general checks for eligibility and ineligibility of costs *(see above)*.The practitioner carried out the general checks for eligibility of purchase costs *(see above)*.To confirm the standard findings in the next column, the practitioner checked that:For ‘equipment, infrastructure or other assets’ (‘equipment) selected in the sample, that are charged as full capitalised costs (instead of depreciation cost), the practitioner checked that * the Grant Agreement explicitly allows that purchases of equipment specifically for the action (or developed as part of the action tasks) may be declared as full capitalised costs
* the costs fulfil the cost eligibility conditions applicable to their respective cost categories
* such capitalised costs correspond to the costs incurred in the purchase or for the development of the equipment, infrastructure or other assets
* they are recorded under a fixed asset account of the participant in compliance with international accounting standards and the participant’s usual cost accounting practices
* there is no double charging of costs (in particular, no charging of depreciation costs for the prototype or pilot plant to the grant or another EU grant).

Costs for renting or leasing such equipment are also eligible if they do not exceed the depreciation costs of similar equipment, infrastructure or assets and do not include any financing fees. If the equipment was not purchased but rented or leased, the practitioner should also check that the costs:* do not exceed the depreciation costs of similar equipment, infrastructure or assets
* do not include any financing fees *(e.g. finance charges included in the finance lease payments or interests on loans taken to finance the purchase)*
* there is no double charging of costs *(e.g. no charging of depreciation costs for equipment previously funded at full cost by an EU grant)*

cid:image002.png@01D0B99B.7C10A740 Equipment that does not comply with the specific conditions for full cost *(e.g. equipment purchased prior to the action but used for the action)* must be declared using the normal depreciation cost. | 1. The costs were eligible (no ineligible components), identifiable and verifiable, linked to the action and incurred by the participant during the duration of the action (proof of payment, no re-invoicing to other entities).
 | YES/NO/N.A. |
| 1. Purchases were made using the participant’s usual purchasing practices and, if applicable, other documents/procedures required for compliance with national law on public procurement.
 | YES/NO/N.A. |
| 1. Purchases were made according to the principle of best value for money (best price-quality ratio) or the lowest price.
 | YES/NO/N.A. |
| 1. The participant applied procedures to ensure the absence of conflict of interest and based on our examination nothing came to our attention that could indicate a potential conflict of interest. The participant has provided the required written confirmation.
 | YES/NO/N.A. |
| 1. The cost eligibility conditions applicable to their respective cost categories are fulfilled.
 | YES/NO/N.A. |
| 1. The Grant Agreement allows for purchases of equipment, infrastructure or other assets specifically for the action (or developed as part of the action tasks) to be declared as full capitalised costs.
 | YES/NO/N.A. |
| 1. Full capitalised costs were recorded under fixed costs account in the participant’s accounting records in compliance with international accounting standards and the participant’s usual accounting practices.
 | YES/NO/N.A. |
| 1. Full capitalised costs correspond to the costs incurred in the purchase or for the development of the equipment and there is no double charging of costs.
 | YES/NO/N.A. |
| 1. Costs for renting or leasing equipment do not exceed the depreciation costs of similar equipment, do not include any financing fees and there is no double charging of costs.
 | YES/NO/N.A. |
|  | **C.2 If depreciation and full cost for listed equipment:***(option in HE, RFCS, DEP, EDF, SMP, AMIF/ISF/BMVI, PERI, UCPM)* | ***For the equipment included in the sample:***The practitioner carried out the general checks for eligibility and ineligibility of costs *(see above)*.The procedure analysed above under cost category C.2 (depreciation only)is performed.Moreover, for equipment purchased specifically for the action (or developed as part of the action tasks) costs may exceptionally be declared as full capitalised costs, if these assets are listed under art. 6.C.2. For equipment that is charged at full acquisition cost, to confirm the standard findings in the next column, the practitioner checked that:* the Grant Agreement explicitly allows that the equipment may be declared as full capitalised costs. Such equipment must be listed in art. 6.C.2.
* the costs fulfil the cost eligibility conditions applicable to their respective cost categories
* such capitalised costs correspond to the costs incurred in the purchase or for the development of the equipment, infrastructure or other assets
* they are recorded under a fixed asset account of the participant in compliance with international accounting standards and the participant’s usual cost accounting practices.
* there is no double charging of costs (in particular, no charging of depreciation costs for the prototype or pilot plant to the grant or another EU grant).

Costs for renting or leasing such equipment are also eligible if they do not exceed the depreciation costs of similar equipment, infrastructure or assets and do not include any financing fees. If the equipment was not purchased but rented or leased, the practitioner should also check that the costs:* do not exceed the depreciation costs of similar equipment, infrastructure or assets
* do not include any financing fees *(e.g. finance charges included in the finance lease payments or interests on loans taken to finance the purchase)*
* there is no double charging of costs *(e.g. no charging of depreciation costs for equipment previously funded at full cost by an EU grant)*.
 | 1. The standard findings under cost category C.2 (depreciation only)are fulfilled.
 | YES/NO/N.A. |
| 1. The costs were eligible (no ineligible components), identifiable and verifiable, linked to the action and incurred by the participant during the duration of the action (proof of payment, no re-invoicing to other entities).
 | YES/NO/N.A. |
| 1. The cost eligibility conditions applicable to their respective cost categories are fulfilled.
 | YES/NO/N.A. |
| 1. The equipment whose costs were declared as full capitalised costs were listed under art.6.C.2 as equipment whose costs may be declared as full capitalised costs.
 | YES/NO/N.A. |
| 1. Full capitalised costs were recorded under fixed costs account in the participant’s accounting records in compliance with international accounting standards and the participant’s usual cost accounting practices.
 | YES/NO/N.A. |
| 1. Full capitalised costs correspond to the costs incurred in the purchase or for the development of the equopment and there is no double charging of costs.
 | YES/NO/N.A. |
| 1. Costs for renting or leasing equipment do not exceed the depreciation costs of similar equipment, do not include any financing fees and there is no double charging of costs.
 | YES/NO/N.A. |
|  | **C.2 If full cost and depreciation for listed equipment:***(option in HE, RFCS, EDF, LIFE, SMP, UCPM)* | ***For the equipment included in the sample:***The procedure analysed above under cost category C.2 (full cost only)is performed.However, for the equipment used for the action that are listed under art. 6.C.2, the costs must be declared as depreciation costs. For these assets, the practitioner:* checked that they are listed under art. 6.C.2 as equipment whose costs must be declared as depreciation costs
* performed the procedure analysed above under C.2 (depreciation only)*.*
 | 1. For the costs declared as full capitalised costs, the standard findings under cost category C.2 (full cost only)are fulfilled.
 | YES/NO/N.A. |
| 1. The costs of the equipment listed under art. 6.C.2 were declared as depreciation costs.
 | YES/NO/N.A. |
| 1. For the costs declared as depreciation costs, the standard findings under cost category C.2 (depreciation only)are fulfilled.
 | YES/NO/N.A. |

### Other goods, works and services (C.3)

| **CFS AGREED-UPON PROCEDURES — Other goods, works and services (C.3)** |
| --- |
| **Grant Agreement Article** | **Cost Category** | **Procedures** | **Standard Finding** | **Result****(Y/N/N.A.)** |
| **Article 6.2.C.3** | **C.3** | **OTHER GOODS, WORKS AND SERVICES** |
| **Article 6.2.C.3** | **C.3 OTHER GOODS, WORKS AND SERVICES** | ***The practitioner draws a sample to carry out the procedures under this cost category. The sample should be selected randomly. It should cover 10% of all items for which costs were declared, with a minimum sample of 10 items (or all if less than 10 items were declared).***The practitioner sampled \_\_\_\_\_ items out of a total of \_\_\_\_\_. |  |
| ***For the other purchases included in the sample:***The practitioner carried out the general checks for eligibility and ineligibility of costs *(see above)*.The practitioner carried out the general checks for eligibility of purchase costs *(see above)*.Purchases of other goods, works and services for the action must be calculated on the basis of the costs actually incurred. Such goods, works and services include, for instance, consumables and supplies, promotion, dissemination, protection of results, translations, publications, certificates and financial guarantees, if required under the Agreement.To confirm the standard findings in the next column, the practitioner checked that:* purchases of other goods, works and services were declared eligible (as costs actually incurred) in the Grant Agreement
* the contracts did not cover tasks described in Annex 1 GA (these should be charged as subcontracting costs)
* the goods, works or services were purchased specifically for the action and they were correctly allocated to the action (with supporting documents such as delivery note invoice or any other proof demonstrating the link to the action)
* the actual existence of the sampled items by physical inspection
* the goods were not placed in the inventory of durable equipment (otherwise they should be charged as equipment costs)
* the costs charged to the action were accounted in line with the participant’s usual accounting practices. If it is the participant’s usual accounting practice to consider some of these costs (or all of them) as indirect costs, they cannot be declared as direct costs.
 | 1. The cost were eligible (no ineligible components), identifiable and verifiable, linked to the action and incurred by the participant (proof of payment, no re-invoicing to other entities) during the duration of the action in accordance with its usual cost accounting practices.
 | YES/NO/N.A. |
| 1. Purchases were made using the participant’s usual purchasing practices and, if applicable, other documents/procedures required for compliance with national law on public procurement.
 | YES/NO/N.A. |
| 1. Purchases were made according to the principle of best value for money (best price-quality ratio) or the lowest price.
 | YES/NO/N.A. |
| 1. The participant applied procedures to ensure the absence of conflict of interest and based on our examination nothing came to our attention that could indicate a potential conflict of interest. The participant has provided the required written confirmation.
 | YES/NO/N.A. |
| 1. Contracts for works or services did not cover tasks described in Annex 1 GA.
 | YES/NO/N.A. |
| 1. Costs were allocated to the correct action and the goods were not placed in the inventory of durable equipment.
 | YES/NO/N.A. |
| 1. The costs were charged in line with the participant’s accounting practices and were adequately supported.
 | YES/NO/N.A. |
| 1. Correct and complete entry made in the accounting system of the participant.
 | YES/NO/N.A. |

**Other cost categories (D.)**

### Financial support to third parties (D.1)

| **CFS AGREED-UPON PROCEDURES — Financial Support to third parties (D.1)** |
| --- |
| **Grant Agreement Article**  | **Cost Category** | **Procedures** | **Standard Finding** | **Result****(YES/NO/N.A.)** |
| **Article 6.2.D** | **D.** | **OTHER COST CATEGORIES** |
| **Article 6.2.D.1** | **D.1** | **FINANCIAL SUPPORT TO THIRD PARTIES** |
| **Article 6.2.D.1** | **D.1 FINANCIAL SUPPORT TO THIRD PARTIES***(all programmes except RFCS, SMP ESS, EUAF, CUST/FISC, CCEI, PERI, TSI, UCPM)***D.1 If actual costs:***(all except SMP COSME EYE)* | ***The practitioner draws a sample to carry out the procedures under this cost category.* *The sample should be selected randomly. It should cover 10% of all items for which costs were declared, with a minimum sample of 10 items (or all if less than 10 items were declared).***The practitioner sampled \_\_\_\_\_ items out of a total of \_\_\_\_\_. |  |
| ***For the FSTP items included in the sample:***The practitioner carried out the general checks for eligibility and ineligibility of costs *(see above)*.The practitioner checked that the costs for providing financial support to third parties ((in the form of grants, prizes or similar forms of support; if any):* were declared eligible in the Grant Agreement
* the maximum amount of financial support to each third party is not more than the amount per recipient set out in the Data Sheet or otherwise agreed with the granting authority and in compliance with the applicable call conditions under which the Grant Agreement has been issued

The practitioner also:* reconciled the list of recipients for whom costs have been claimed with the proposals and project documentation.
* checked the existence of signed agreements/acceptance forms between the participants and the recipients. Unless otherwise provided for in the call conditions, financial support to third parties needs to be given directly from the EU grant participant to the (final) recipients, without further intermediaries.
* checked if there were audits undertaken by the participant on the recipients. Trace the cost adjustments to the financial statements to the EU and ensure that they were taken into account.

The practitioner checked that the support is implemented in accordance with the conditions set out in Annex 1 GA that must ensure objective and transparent selection procedures and include at least the following minimum conditions:* for grants (or similar):
* the maximum amount of financial support for each third party (‘recipient’); this amount may not exceed the amount set out in the Data Sheet or otherwise agreed with the granting authority
* the criteria for calculating the exact amount of the financial support
* the different types of activity that qualify for financial support, on the basis of a closed list
* the persons or categories of persons that will be supported and
* the criteria and procedures for giving financial support
* for prizes (or similar):
* the eligibility and award criteria
* the amount of the prize and
* the payment arrangements
* for other kinds of financial support to third parties:
* the maximum amount of financial support for each third party (‘recipient’); this amount may not exceed the amount set out in the Data Sheet or otherwise agreed with the granting authority
* the criteria for determining the exact amount
* the types of activities to be funded
* the types of recipients eligible.

If a call allows financial support to third parties, directly or via implementing partners, in repayable form such as (micro)loans or other financial instruments with a long-term character that exceed by their nature the duration of the action and Annex 1 GA must provide for specific conditions on cost eligibility and acceptance. The practitioner checked that these specific conditions are fulfilled.The practitioner checked that the support is implemented in compliance with specific call conditions (if any).  | 1. The cost were eligible (no ineligible components), identifiable and verifiable, linked to the action and incurred by the participant (proof of payment, no re-invoicing to other entities) during the duration of the action in accordance with its usual cost accounting practices.
 | YES/NO/N.A. |
| 1. The costs for providing financial support to third parties were declared eligible in the call conditions and the Grant Agreement.
 | YES/NO/N.A. |
| 1. The costs did not exceed the maximum amount of financial support to each third party.
 | YES/NO/N.A. |
| 1. The support has been awarded in line with the conditions defined in Annex 1 GA.
 | YES/NO/N.A. |
| 1. The (minimum) conditions for the support are set out in Annex 1 GA and that these were also already part of the proposal.
 | YES/NO/N.A. |
|  |  |
|  | **D.1 If unit costs:***(SMP COSME EYE)* | N/A |

### Internally invoiced goods and services (D.2)

| **CFS AGREED-UPON PROCEDURES — Internally invoiced goods and services (D.2)** |
| --- |
| **Grant Agreement Article** | **Cost Category** | **Procedures** | **Standard Finding** | **Result****(YES/NO/N.A.)** |
| **Article 6.2.D.2** | **D.2** | **INTERNALLY INVOICED GOODS AND SERVICES** |
| **Article 6.2.D.2** | **D.2 INTERNALLY INVOICED GOODS AND SERVICES (unit costs calculated in accordance with usual cost accounting practices)***(HE, DEP, EDF)* | ***The practitioner draws a sample to carry out the procedures under this cost category.* *The sample should be selected randomly. It should cover 10% of all items for which costs were declared, with a minimum sample of 10 items (or all if less than 10 items were declared).***The practitioner sampled \_\_\_\_\_ items out of a total of \_\_\_\_\_. |  |
| ***For the internally invoiced items included in the sample:***The practitioner carried out the general checks for eligibility and ineligibility of costs *(see above)*.‘Internally invoiced goods and services’ means goods or services which are provided within the participant’s organisation directly for the action and which the participant values on the basis of its usual cost accounting practices. This budget category covers the costs for goods and services that the participant itself produced or provided for the action.To confirm the standard findings in the next column, the practitioner checked that:* the units have been actually implemented (used or produced)
* the units were necessary for the implementation of the action
* the participant did not declare costs covered by the unit cost also under other cost categories
* the specific eligibility conditions set out in the Grant Agreement (if any) were complied with.

Costs of internally invoiced goods and services must be declared as unit costs in accordance with usual cost accounting practices of the participant. The usual cost accounting practices of the participant must define both the unit *(e.g. hour of use of wind tunnel, one genomic test, one electronic wafer fabricated internally, etc)* and the methodology to determine the cost of the unit. To confirm the standard findings in the next column, the practitioner:* obtained records and documents supporting the costs claimed as unit costs to understand the methodology used
* obtained a description of the participant’s usual cost accounting practice to calculate costs of internally invoiced goods and services (unit costs)
* checked whether the participant’s usual cost accounting practice was applied for the financial statements subject of the present CFS
* ensured that the participant’s usual cost accounting practices to calculate unit costs is being used in a consistent manner, regardless of the source of funding
* checked that the same unit cost has been applied in a consistent manner in other transactions not involving EU grants
* checked that any ineligible costs or any costs claimed under other budget categories, have not been taken into account when calculating the costs of internally invoiced goods and services *(see art. 6)*
* checked whether actual costs of internally invoiced goods and services were adjusted on the basis of budgeted or estimated elements and, if so, verified whether those elements used are actually relevant for the calculation, and correspond to verifiable information. Estimates represents less than 5% of the declared costs
* for all programmes except Horizon Europe:checked that any costs of items which are not directly linked to the production of the invoiced goods or service *(e.g. supporting services like cleaning, general accountancy, administrative support, etc. not directly used for production of the good or service)* have not been taken into account when calculating the costs of internally invoiced goods and services
* for all programmes except Horizon Europe:checked that costs of resources that do not belong to the participant and which it uses free of charge *(e.g. personnel or equipment of a third party provided free of charge)*, have not been taken into account when calculating the costs of internally invoiced goods and services *(see art. 6)*, because those costs are not in its accounts *(see art. 6.1(a)(v))*
* checked that any costs of items used for calculating the costs internally invoiced goods and services are supported by evidence and registered in the accounts.
 | 1. The cost were eligible (no ineligible components), identifiable and verifiable, linked to the action and incurred by the participant (proof of payment, no re-invoicing to other entities) during the duration of the action in accordance with its usual cost accounting practices.
 | YES/NO/N.A. |
| 1. The methodology of the practitioner included at least the method to determine the amount per unit used, adequate supporting records and documents to prove the number of units declared, details of the number of units declared and the amount per unit used making up the total costs claimed etc.
 | YES/NO/N.A. |
| 1. The number of units for internal invoices have been actually implemented (used or produced) and necessary for the implementation of the action.
 | YES/NO/N.A. |
| 1. The costs declared as internal invoices do not include costs declared under other cost categories.
 | YES/NO/N.A. |
| 1. The specific eligibility conditions set out in the Grant Agreement (if any) have been fulfilled.
 | YES/NO/N.A. |
| 1. The costs of internally invoiced goods and services included in the financial statement were calculated in accordance with the participant’s usual cost accounting practices.
 | YES/NO/N.A. |
| 1. The usual cost accounting practices used to calculate the costs of internally invoiced goods and services were applied by the participant in a consistent manner regardless of the source of funding.
 | YES/NO/N.A. |
| 1. It is the usual practice of the participant to calculate a unit cost for these good or service based on objective criteria that are verifiable.
 | YES/NO/N.A. |
| 1. Unit costs have been applied in a consistent manner in other transactions not involving EU grants.
 | YES/NO/N.A. |
| 1. The unit cost is calculated using the actual costs for the good or service recorded in the participant’s accounts, excluding any ineligible cost, costs included in other budget categories, or costs of resources that do not belong to the participant and which it uses free of charge.
 | YES/NO/N.A. |
| 1. The cost items used for calculating the actual costs of internally invoiced goods and services were relevant, and correspond to verifiable information.
 | YES/NO/N.A. |
| 1. Costs of items used for calculating the costs internally invoiced goods and services are supported by evidence and registered in the accounts.
 | YES/NO/N.A. |
| 1. Allocation keys used are those defined in the participant participant’s usual costs accounting practices used for the non EU funded projects.
 | YES/NO/N.A. |
| * for Horizon Europe: checked that the amount per unit, for providing internally the good or service, has been calculated using the actual direct and indirect costs recorded in the participant’s accounts, attributed either by direct measurement or on the basis of cost drivers in line with participant’s accounting practices.
 | 1. The amount per unit has been calculated using the actual direct and indirect costs recorded in the participant’s accounts, attributed either by direct measurement or on the basis of costs drivers as defined in the participant participant’s usual costs accounting practices.
 | YES/NO/N.A. |

### Indirect costs (E.)

| **CFS AGREED-UPON PROCEDURES — Indirect costs (E.)** |
| --- |
| **Grant Agreement Article**  | **Cost Category** | **Procedures** | **Standard Finding** | **Result****(YES/NO/N.A.)** |
| **Article 6.2.E** | **E.** | **INDIRECT COSTS** |
| **Article 6.2.E** | **E. INDIRECT COSTS****If flat-rate:***(mandatory in all programmes; option in EDF)* | N/A |

### Currency for financial statements and conversion into euro

| **CFS AGREED-UPON PROCEDURES — Currency for financial statements and conversion into euro** |
| --- |
| **Grant Agreement Article** | **Cost Category** | **Procedures** | **Standard Finding** | **Result****(YES/NO/N.A.)** |
| **Article 21.3** |  | **CURRENCY FOR FINANCIAL STATEMENTS AND CONVERSION INTO EUROS** |
| **Article 21.3** | **CURRENCY CONVERSION** | ***For the samples from all cost categories:***To confirm the standard findings in the next column, the practitioner reviewed the samples selected in all cost categories for cost incurred in currencies other than the euro and checked:* for participants with accounts established in euros: costs incurred in another currency were converted into euro by applying the participant’s usual accounting practices
* for participants with accounts established in a currency other than euros: exchange rates used for converting local currency into euros or other currencies into local currencies were in accordance with art. 21.3 GA and the corresponding [AGA — Annotated Grant Agreement](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/aga_en.pdf)\* section.
 | Participants with accounts established in euro converted costs in accordance with their usual accounting practice.ORFor participants with accounts established in a currency other than euro, cost were correctly converted (in accordance with art. 21.3 GA and the corresponding [AGA — Annotated Grant Agreement](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/aga_en.pdf)\* section). | YES/NO/N.A. |

### Revenues

| **CFS AGREED-UPON PROCEDURES — Revenues** |
| --- |
| **Grant Agreement Article** | **Cost Category** | **Procedures** | **Standard Finding** | **Result****(YES/NO/N.A.)** |
| **Article 22.3.4**  |  | **REVENUES** |
| **Article 22.3.4** | **REVENUES****If no profit rule is NOT activated in the GA Data Sheet OR the entity is a non-profit orgranisation:** | N/A |
| **If the no-profit rule is activated in the GA Data Sheet and the entity is a for-profit organisation:** | ***For revenue transactions:***To confirm the standard findings in the next column, the practitioner examined transactions of revenues to identify any income generated by the action, such as:* sale of equipment or assets bought for or generated by the project (limited to the claimed eligible cost of purchase); admission fee to a conference carried out by the consortium; sale of the proceedings of a conference.

‘Revenue’ is all income generated by the action, during its duration *(see art. 4)*, for participants that are profit legal entities.For Horizon Europe:Revenue does not include income from exploitation of results, *see Annex 5 GA (e.g. commercialising a product or service)*The practitioner also confirmed that revenues related to the action, if any, were duly booked in the participant’s accounts and declared to the granting authority. | 1. The accounting system allows to identify expenses and revenues related to the action.
 | YES/NO/N.A. |
| 1. The participant has declared all revenues (i.e. income generated by the action) in the interim and/or final reports.
 | YES/NO/N.A. |

### In-kind contributions

| **CFS AGREED-UPON PROCEDURES — In-kind contributions** |
| --- |
| **Grant Agreement Article** | **Cost Category** | **Procedures** | **Standard Finding** | **Result****(YES/NO/N.A.)** |
| **Article 9.2** |  | **IN-KIND CONTRIBUTIONS BY THIRD PARTIES** |
| **Article 9.2** | **IN-KIND CONTRIBUTIONS****If in-kind contributions allowed but not eligible:** | N/A |
| **If in-kind contributions allowed and eligible:***(HE)* | **For all cost categories:*****For in-kind contributions provided by third parties free-of charge declared as eligible direct costs by the participants which use them (under the same conditions and relevant cost category as if they were their own):***To confirm the standard findings in the next column, the practitioner checked in the sample of each cost category that:* costs for in-kind contributions were correctly declared in line with art. 6.1 and 9.2
* the third parties and their in-kind contributions are mentioned in Annex 1 GA (or approved via a technical report)
* in line with art. 6.1, costs declared as in-kind free-of-charge do not exceed the direct costs incurred by the contributing third party for the in -kind contribution, by obtaining invoices, accounting entries etc.

The practitioner also checked that there were binding agreements between the participant and the third party that ensured the rights of bodies mentioned in art. 25 are also ensured towards the third party giving in-kind contributions. | 1. Cost for in-kind contributions were foreseen in Annex 1 GA (or approved via a technical report) and declared under the relevant cost category.
 | YES/NO/N.A. |
| 1. The rights of bodies mentioned in art. 25 are also ensured towards the third party giving in-kind contributions.
 | YES/NO/N.A. |

SIGNATURE

For the practitioner

[forename/surname/function]

[address]

[signature]

[date] [stamp]

# AGREED-UPON PROCEDURES REPORT ON THE CERTIFICATE ON THE FINANCIAL STATEMENT (CFS)

To

[Organisation full name

address]

The purpose of this CFS is to provide the EU granting authority with findings in accordance with the agreed-upon procedures (AUP) set out in the Terms of Reference, in order to be able to assess whether certain costs (and, if relevant, also revenues) comply with the conditions set out in the EU Grant Agreement. This report is solely intended for this purpose.

The agreed-upon procedures have been set and determined as appropriate by the EU granting authority.

The agreed-upon procedures engagement involves our performing the agreed-upon procedures set out in the Terms of Reference, as agreed with the participant. We do not assess the appropriateness, nor do we provide an audit opinion or assurance. Had we performed additional procedures, other matters might have come to our attention that would have been reported.

We, [**full name of the practitioner (firm)**], established in [full address/city/country], represented for signature of this CFS by [name and function of an authorised representative],

**hereby report that**

1 — We are qualified/authorised to deliver this CFS *[(for additional information, see appendix to this certificate)]* and are not subject to any conflict of interest.

2 — We have performed the agreed-upon procedures engagement in accordance with the Terms of Reference (including the agreed-upon procedures checklist, which forms an integral part of the Terms of Reference), and in particular the following standards:

* + the International Standard on Related Services (ISRS) 4400 (revised) *Agreed-upon Procedures Engagements* as issued by the International Auditing and Assurance Standards Board (IAASB)
	+ the *International Code of Ethics for Professional Accountants (including International Independent Standards)* issued by the International Ethics Standards Board for Accountants (IESBA), including the independence requirements
	+ the International Standard on Quality Control 1 *Quality Control for Firms that Perform Audits and Reviews of financial statements, and Other Assurance and Related Services Engagements* (equivalent).

3 — We have performed the agreed-upon procedures on costs and revenues declared in the financial statement(s) of [**organisation legal name (short name)**], PIC [number], under EU Grant Agreement No [**insert number**] — [**insert acronym**], covering the following reporting period(s): [**insert reporting period(s)**].

The relevant costs and revenues subject to this report amount to:

* total actual costs of **EUR [insert cost amount]**
* total unit cost in accordance with usual cost accounting practices of **EUR [insert cost amount]** and
* total revenues of EUR **[insert revenue amount]**.

In accordance with the Terms of Reference, specific cost categories based on unit costs (other than unit costs in accordance with usual cost accounting practices), flat-rates or lump sums were not subject to this report. The financial statement(s) for the relevant reporting period(s) contained such costs amounting in total to EUR [insert number].

4 — We have performed the agreed-upon procedures on the reporting period(s) listed above.

The standard findings could be confirmed, with the following **exceptions**:

**N.[insert number of not confirmed standard finding] – [insert cost category] – [insert amount per reporting period** or **‘not quantifiable’**)**]:** [provide **factual explanation** of ‘NO’-result finding e.g. calculation error, lack of supporting document, non-compliance with national law, etc.]

*Repeat as needed*

The following agreed-upon procedures (and standard findings) were **not applicable**:

**N.[insert number of not applicable AUP/standard finding] – [insert cost category]:** [provide **factual explanation** of ‘N.A.’-result finding e.g. no cost declared under one of the cost category.]

*Repeat as needed*

**Further remarks:**

[insert any additional remarks]

5 — The participant paid a **price** of EUR [insert amount]) (including VAT of EUR [insert amount]) for this CFS. *[OPTION 1:* These costs are eligible under the grant and included in the financial statement.*][OPTION 2:* These costs were not charged to the grant.*]*

*[OPTION:* **Other comments:**

[if needed, insert free text to add additional information depending on the specificities of the CFS (ex. confidentiality requirements), ensuring that it does not call into question the ToR, Grant Agreement or other applicable provisions)]*]*

**Annexes**: Terms of Reference and AUP checklist (signed and completed)

SIGNATURE

For the practitioner

[forename/surname/function]

[address]

[signature]

[date] [stamp]

|  |
| --- |
| **HISTORY OF CHANGES** |
| VERSION | PUBLICATION DATE | CHANGE |
| [1.0](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/temp-form/report/cfs_v1.0_en.docx) | 20.12.2021 | Initial version (new MFF).  |
| [1.1](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/temp-form/report/cfs_v1.1_en.docx)  | 15.03.2023 | Small clarification in certificate text |
| [2.0](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/temp-form/report/cfs_v2.0_en.docx) | 15.02.2024 | Full version rework. |
| 2.1 | 15.04.2024 | Section 5 ’Other terms’ added in ToR.Section ’Other comments’ added in report.Changes to the checklist:Options for FSTP unit costs added.Clarifications on scope of different types of cost categories (programme names added in purple).Minor changes in section on average personnel costs.Minor changes concerning the presentation in the sections on travel and equipment. |
|  |  |  |

1. Directive [2006/43/EC](http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1447145828278&uri=CELEX:32006L0043) of the European Parliament and of the Council of 17 May 2006 on statutory audits of annual accounts and consolidated accounts (OJ L 157, 9.6.2006, p. 87). [↑](#footnote-ref-2)
2. Regulation (EU, Euratom) 2018/1046 of the European Parliament and of the Council of 18 July 2018 on the financial rules applicable to the general budget of the Union (‘Financial Regulation’) (OJ L 193, 30.7.2018, p. 1). [↑](#footnote-ref-3)
3. The person must be hired under either: a direct contract signed between the participant and the natural person (not through another legal entity; e.g. a temporary agency) or a contract signed between the participant and a legal entity fully owned by that natural person and which has no other staff than the natural person being hired. [↑](#footnote-ref-4)