

#### GRANT AGREEMENT

**NUMBER 826452 — Arrowhead Tools**

This **Agreement** (‘the Agreement’) is **between** the following parties:

#### on the one part,

the **Electronic Component Systems for European Leadership Joint Undertaking** ('the JU'),

##### represented for the purposes of signature of this Agreement by the JU Executive Director or his/her representative, Bert DE COLVENAER,

**and**

**on the other part,**

1. ‘the coordinator’:

**LULEA TEKNISKA UNIVERSITET (LTU)**, established in UNIVERSITETSOMRADET

##### PORSON, LULEA 971 87, Sweden, VAT number: SE202100284101, represented for the purposes of signing the Agreement by vice chancellor, Birgitta Bergvall-kåreborn

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

1. **AEE - INSTITUT FUR NACHHALTIGE TECHNOLOGIEN (AEE INTEC)**, established in FELDGASSE 19, GLEISDORF 8200, Austria,
2. **ACCIONA CONSTRUCCION SA (ACCIONA)**, established in AVENIDA DE EUROPA 18 PARQUE EMPRESARIAL, ALCOBENDAS 28108, Spain, VAT number: ESA81638108,

##### **ARCELIK A.S. (ARCELIK)**, established in KARAAGAC, SUTLUCE BEYOGLU CAD. NO:2-6, ISTANBUL 34445, Turkey, VAT number: TR0730018000,

1. **DAC Spolka Akcyjna (DAC)**, established in UL. KOŁOBRZESKA NR 14, GDANSK 80-394, Poland, VAT number: PL5842746524,

##### **BNEARIT AB (BNEARIT)**, established in STATIONSGATAN 69, LULEA 972 34, Sweden, VAT number: SE556620816001,

1. **BOLIDEN MINERAL AB (BOLIDEN)**, established in ., SKELLEFTEHAMN 932 81, Sweden, VAT number: SE663000107801,
2. **DOTGIS CORPORATION SL (dotGIS)**, established in CALLE REDECILLA DEL CAMINO 2 PORTAL J 4B, MADRID 28050, Spain, VAT number: ESB87543039,

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1. **ECLIPSE FOUNDATION EUROPE GMBH (ECLIPSE)**, established in ANNASTRASSE 46, ZWINGENBERG 64673, Germany, VAT number: DE293107796,
2. **EQUA SIMULATION AB (EQUA)**, established in Rasundavaegen 100, SOLNA 16957, Sweden, VAT number: SE556612241101,
3. **EUROTECH SPA (EUROTECH)**, established in VIA FRATELLI SOLARI 3A, AMARO 33020, Italy, VAT number: IT01791330309,
4. **FAGOR ARRASATE S COOP (FARR)**, established in BARRO SAN ANDRES 20, ARRASATE MONDRAGON 20500, Spain, VAT number: ESF20020574,
5. **FAGOR AUTOMATION S COOP LTDA (FAUT)**, established in BARRIO SAN ANDRES 19, MONDRAGON 20500, Spain, VAT number: ESF20071114,
6. **POLITECHNIKA GDANSKA (GUT)**, established in UL. GABRIELA NARUTOWICZA 11/12, GDANSK 80-233, Poland, VAT number: PL5840203593,
7. **IKERLAN S COOP (IK4-IKERLAN)**, established in P JOSE MARIA ARIZMENDIARRIETA 2, MONDRAGON 20500, Spain, VAT number: ESF20079828,
8. **INFINEON TECHNOLOGIES AUSTRIA AG (IFAT)**, established in SIEMENSSTRASSE 2, VILLACH 9500, Austria, VAT number: ATU46981707,
9. **INFINEON TECHNOLOGIES DRESDEN GMBH& CO KG (IFD)**, established in KONIGSBRUCKER STRASSE 180, DRESDEN 01099, Germany, VAT number: DE163852010,
10. **INFINEON TECHNOLOGIES AG (IFAG)**, established in AM CAMPEON 1-15, NEUBIBERG 85579, Germany, VAT number: DE812655055,
11. **USTAV TEORIE INFORMACE A AUTOMATIZACE AV CR VVI (UTIA)**, established in POD VODARENSKOU VEZI 4 LIBEN, PRAHA 8 182 00, Czech Republic, VAT number: CZ67985556,
12. **CONSORZIO NAZIONALE INTERUNIVERSITARIO PER LA NANOELETTRONICA (IUNET)**, established in VIA TOFFANO 2, BOLOGNA 40125, Italy, VAT number: IT02598581201,
13. **JOTNE EPM TECHNOLOGY AS (Jotne)**, established in GRENSEVEIEN 107, OSLO 0663, Norway, VAT number: NO948979357MVA,
14. **KAI KOMPETENZZENTRUM AUTOMOBIL - UND INDUSTRIEELEKTRONIK GMBH (KAI)**, established in EUROPASTRASSE 8, VILLACH ST MAGDALEN 9524, Austria, VAT number: ATU62221937,
15. **LINDBACKS BYGG AB (LIND)**, established in N/A, PITEA 941 28, Sweden, VAT number: SE556118083601,
16. **LUNDQVIST TRAVARU AB (LQT)**, established in MEJSELVAGEN 28, OJEBYN 943 36, Sweden, VAT number: SE556066049901,
17. **MONDRAGON GOI ESKOLA POLITEKNIKOA JOSE MARIA ARIZMENDIARRIETA S COOP (MGEP)**, established in LORAMENDI 4, ARRASATE 20500, Spain, VAT number: ESF20045241,

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1. **MONDRAGON SISTEMAS DE INFORMACION SOCIEDAD COOPERATIVA (MSI)**, established in CALLE AMA KANDIDA 21, ANDOAIN 20140, Spain, VAT number: ESF20585576,
2. **HOGSKOLEN I OSTFOLD (HIOF)**, established in REMMEN, HALDEN 1757, Norway, VAT number: NO971567376MVA,
3. **PHILIPS MEDICAL SYSTEMS NEDERLAND BV (PHILIPS)**, established in VEENPLUIS 4-6, BEST 5684 PC, Netherlands, VAT number: NL009076840B01,

##### **PODCOMP AB (PODCOMP)**, established in SKYLAVAGEN 1, OJEBYN 94333, Sweden, VAT number: SE556401485901,

1. **POLITECNICO DI TORINO (POLITO)**, established in CORSO DUCA DEGLI ABRUZZI 24, TORINO 10129, Italy, VAT number: IT00518460019,
2. **SANTER REPLY SPA (REPLY)**, established in VIA ROBERT KOCH 1/4, MILANO 20152, Italy, VAT number: IT13262400156,
3. **KNOWLEDGE CENTRIC SOLUTIONS SL (REUSE)**, established in CALLE MARGARITA SALAS 16 PARQUE TECNOLOGICO LEGATE, LEGANES MADRID 28919, Spain, VAT number: ESB87512893,
4. **STMICROELECTRONICS SRL (ST-I)**, established in VIA C.OLIVETTI 2, AGRATE BRIANZA 20864, Italy, VAT number: IT00951900968,
5. **NORGES TEKNISK-NATURVITENSKAPELIGE UNIVERSITET NTNU (NTNU)**, established in HOGSKOLERINGEN 1, TRONDHEIM 7491, Norway, VAT number: NO974767880MVA,
6. **TELLU IOT AS (TELLU IOT)**, established in LENSMANNSLIA 4, ASKER 1386, Norway, VAT number: NO917519919MVA,
7. **TECHNISCHE UNIVERSITAET DRESDEN (TUD)**, established in HELMHOLTZSTRASSE 10, DRESDEN 01069, Germany, VAT number: DE188369991,
8. **TECHNISCHE UNIVERSITAET KAISERSLAUTERN (TUK)**, established in GOTTLIEB DAIMLER STRASSE, KAISERSLAUTERN 67663, Germany,
9. **UNIVERSIDAD CARLOS III DE MADRID (UC3M)**, established in CALLE MADRID 126, GETAFE (MADRID) 28903, Spain, VAT number: ESQ2818029G,
10. **ULMA EMBEDDED SOLUTIONS S COOP (ULMA)**, established in GARAGALTZA AUZOA 51, ONATI 20560, Spain, VAT number: ESF75010462,
11. **Kompetenzzentrum - Das Virtuelle Fahrzeug, Forschungsgesellschaft mbH (VIF)**, established in Inffeldgasse 21 A, Graz 8010, Austria, VAT number: ATU54713500,
12. **SIRRIS HET COLLECTIEF CENTRUM VAN DE TECHNOLOGISCHE INDUSTRIE (SIRRIS)**, established in BOULEVARD AUGUSTE REYERS 80 DIAMANT BUILDING, BRUXELLES 1030, Belgium, VAT number: BE0406606380,

##### **3E NV (3E)**, established in KALKKAAI 6, BRUSSEL 1000, Belgium, VAT number: BE0465755594,

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##### **VOLVO LASTVAGNAR AB (VTC)**, established in c/o Volvo Business Services AB, GOTEBORG 405 08, Sweden, VAT number: SE556013970001,

1. **ELEKTRONIKAS UN DATORZINATNU INSTITUTS (EDI)**, established in DZERBENES IELA 14, RIGA 1006, Latvia, VAT number: LV90002135242,
2. **FORSCHUNG BURGENLAND GMBH (FB)**, established in CAMPUS 1, EISENSTADT 7000, Austria,
3. **VYSOKE UCENI TECHNICKE V BRNE (BUT)**, established in ANTONINSKA 548/1, BRNO STRED 601 90, Czech Republic, VAT number: CZ00216305,
4. **CESKE VYSOKE UCENI TECHNICKE V PRAZE (CVUT)**, established in JUGOSLAVSKYCH PARTYZANU 1580/3, PRAHA 160 00, Czech Republic, VAT number: CZ68407700,
5. **ROPARDO SRL (ROPARDO)**, established in STR RECONSTRUCTIEI 2A, SIBIU 550129, Romania,

##### **SAP NORWAY AS (SAP)**, established in LYSAKER TORG 5, LYSAKER 1366, Norway, VAT number: NO980500101MVA,

1. **INSTITUTE FUR ENGINEERING DESING OF MECHATRONIC SYSTEMS UND MPLM EV (EDMS)**, established in LIPOWSKYSTRASSE 23, MUNCHEN 81373, Germany,
2. **CISC SEMICONDUCTOR GMBH (CISC)**, established in LAKESIDE B07, KLAGENFURT 9020, Austria, VAT number: ATU48357807,
3. **INSTITUT FUER AUTOMATION UND KOMMUNIKATION E.V. MAGDEBURG (ifak)**, established in WERNER HEISENBERG STRASSE 1, MAGDEBURG 39106, Germany, VAT number: DE154349216,
4. **COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES (CEA)**, established in RUE LEBLANC 25, PARIS 15 75015, France, VAT number: FR43775685019,
5. **MAGILLEM DESIGN SERVICES SAS (Magillem)**, established in RUE DU FAUBOURG SAINT MARTIN, 251, PARIS 75010, France, VAT number: FR56492681671,

##### **TECHNEXT (TECHNEXT)**, established in 8 AVENUE SAINT JEAN, CANNES 06400, France, VAT number: FR38437779762,

1. **STMICROELECTRONICS GRENOBLE 2 SAS (STM)**, established in RUE JULES HOROWITZ 12, GRENOBLE 38000, France, VAT number: FR49504941337,
2. **AITIA INTERNATIONAL INFORMATIKAI ZARTKORUEN MUKODO RT (AITIA)**, established in CZETZ JANOS UTCA 48-50, BUDAPEST 1039, Hungary,
3. **EVOPRO INNOVATION KFT (EVOPRO)**, established in HAUSZMANN ALAJOS UTCA 2, BUDAPEST 1116, Hungary, VAT number: HU24120614,
4. **BUDAPESTI MUSZAKI ES GAZDASAGTUDOMANYI EGYETEM (BME)**, established in MUEGYETEM RAKPART 3, BUDAPEST 1111, Hungary, VAT number: HU15308799,

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1. **INCQUERY LABS KUTATAS-FEJLESZTESI KFT (IQL)**, established in RAKOCZI UT 36, BUDAPEST 1072, Hungary, VAT number: HU24216182,
2. **UNIVERSIDADE NOVA DE LISBOA (UNL)**, established in CAMPUS DE CAMPOLIDE, LISBOA 1099 085, Portugal, VAT number: PT501559094,
3. **UNIVERSITAT ZU LUBECK (UZL)**, established in RATZEBURGER ALLEE 160, LUBECK 23538, Germany, VAT number: DE202095138,
4. **BEIA CONSULT INTERNATIONAL SRL (BEIA)**, established in STREET POIANA NARCISELOR 12 1ST FLOOR APARTMENT 3 SECTOR 1, BUCURESTI 010158, Romania, VAT number: RO1572582,
5. **TECHNISCHE UNIVERSITEIT EINDHOVEN (TU/e)**, established in GROENE LOPER 3, EINDHOVEN 5612 AE, Netherlands, VAT number: NL001956218B01,
6. **AIT AUSTRIAN INSTITUTE OF TECHNOLOGY GMBH (AIT)**, established in GIEFINGGASSE 4, WIEN 1210, Austria, VAT number: ATU14703506,
7. **SYSTEMA SYSTEMENTWICKLUNG DIPL INF.MANFRED AUSTEN GMBH (SYSTEMA)**, established in MANFRED VON ARDENNE RING 6, DRESDEN 01099, Germany, VAT number: DE159607786,
8. **SEMANTIS INFORMATION BUILDERS GMBH (Semantis)**, established in OBERE ZEIL 2, OBERURSEL 61440, Germany, VAT number: DE249953787,

##### **ROBERT BOSCH GMBH (Bosch)**, established in ROBERT-BOSCH-PLATZ 1, GERLINGEN- SCHILLERHOEHE 70839, Germany, VAT number: DE811128135,

1. **ASML NETHERLANDS B.V. (ASML)**, established in DE RUN 6501, VELDHOVEN 5504DR, Netherlands, VAT number: .,
2. **ICT AUTOMATISERING NEDERLAND BV (ICT)**, established in KOPENHAGEN 9, BARENDRECHT 2993 LL, Netherlands, VAT number: NL823568817B02,
3. **EQUA SOLUTIONS AG (EQCH)**, established in UNTERMULI 3, ZUG 6300, Switzerland, VAT number: CHE115326758MWST,
4. **Hochschule fuer Technik und Wirtschaft Dresden (HTW)**, established in Friedrich-List-Platz 1, Dresden D-01069, Germany, VAT number: DE188729062,
5. **BOSCH SOFTWARE INNOVATIONS GMBH (BOSCH SI)**, established in ULLSTEINSTRASSE 128, BERLIN 12109, Germany, VAT number: DE203273734,
6. **EXPLEO GERMANY GMBH (EXPLEO)**, established in ERWIN VON KREIBIG STRASSE 3, MUNCHEN 80807, Germany, VAT number: DE129470722,
7. **MONDRAGON CORPORACION COOPERATIVA SCOOP (MON)**, established in PASEO JOSE M ARIZMENDIARRIETA 5, MONDRAGON GUIPUZCOA 20500, Spain, VAT number: ESF20350823,

##### **WAPICE OY (WAPICE)**, established in YLIOPISTONRANTA 5 3RD FLOOR, VAASA 65200, Finland, VAT number: FI15720406,

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##### **ABB OY (ABB)**, established in HIOMOTIE 13, HELSINKI 00381, Finland, VAT number: FI07634030,

1. **Teknologian tutkimuskeskus VTT Oy (VTT)**, established in VUORIMIEHENTIE 3, Espoo 02150, Finland, VAT number: FI26473754,
2. **TECHNOLUTION BV (TECHNOLUTION BV)**, established in BURGERMEESTER JAMESSINGEL 1, GOUDA 2803 WV, Netherlands, VAT number: NL007781465B01,
3. **CAMEA, spol. s r.o. (CAMEA)**, established in KORENSKEHO 25, BRNO 62100, Czech Republic, VAT number: CZ60746220,
4. **CSC-TIETEEN TIETOTEKNIIKAN KESKUS OY (CSC)**, established in Keilaranta 14, ESPOO 02101, Finland, VAT number: FI09206320,

##### 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

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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 ‘**Arrowhead Tools for Engineering of Digitalisation Solutions**’ — ‘**Arrowhead Tools**’ **(‘action’)**, as described in Annex 1.

#### ARTICLE 3 — DURATION AND STARTING DATE OF THE ACTION

The duration of the action will be **39 months** as of 1 May 2019 (‘**starting date of the action**’). **ARTICLE 4 — ESTIMATED BUDGET AND BUDGET TRANSFERS**

#### 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 linked third party) and budget category (see Articles 5, 6, and 14).

* 1. **Budget transfers**

The estimated budget breakdown indicated in Annex 2 may be adjusted — without an amendment (see Article 55) — by transfers of amounts between 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.

In addition, the estimated budget breakdown indicated in Annex 2 may not be adjusted by transfers of amounts between beneficiaries. This requires in all cases an amendment according to Article 55.

**CHAPTER 3 GRANT**

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

* 1. **Maximum grant amount**

The ‘**maximum grant amount**’ is **EUR 22 761 456.69** (twenty two million seven hundred and sixty one thousand four hundred and fifty six EURO and sixty nine eurocents).

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#### Form of grant, reimbursement rates and forms of costs

The grant reimburses the action’s eligible costs (see Article 6) (‘**reimbursement of eligible costs grant**’) according to the following reimbursement rates (see Annex 2):

- for beneficiaries established in **countries other than Participating countries having entrusted the JU with the implementation and payment of their contributions**:

##### **25%**1 of the eligible costs of the beneficiaries and linked third parties that are SMEs2 or natural persons,

**20%**3 of the eligible costs of the beneficiaries and linked third parties that are for-profit private entities other than SMEs,

**35%**4 of the eligible costs of the other beneficiaries and linked third parties.

The estimated eligible costs of the action are EUR **90 709 907.60** (ninety million seven hundred and nine thousand nine hundred and seven EURO and sixty eurocents) .

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

* + 1. for **direct personnel costs**:
       - 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**);

* + 1. for **direct costs for subcontracting**: as actually incurred costs (**actual costs**);
    2. for **direct costs of providing financial support to third parties**:not applicable;
    3. for **other direct costs**:

##### for costs of internally invoiced goods and services: on the basis of an amount per unit calculated by the beneficiary in accordance with its usual cost accounting practices (‘**unit costs**’);

* + - * for all other costs: as actually incurred costs (**actual costs**);
    1. for **indirect costs**: on the basis of a flat-rate applied as set out in Article 6.2, Point E (‘**flat-rate costs**’);

1 The percentage shall only correspond to the reimbursement rate applied by the JU under EU funding rules.

2 This percentage shall be applied for the whole duration of the action, even if the status of these beneficiaries changes during the action.

3 The percentage shall only correspond to the reimbursement rate applied by the JU under EU funding rules.

4 The percentage shall only correspond to the reimbursement rate applied by the JU under EU funding rules.

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* + 1. **specific cost category(ies):** not applicable.

#### 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 JU — 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

* + 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 and linked third parties (see Article 20) and approved by the JU (see Article 21).

* + 1. **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.

* + 1. **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 JU.

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

The following are considered **receipts**:

##### 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;

* + - 1. financial contributions given by third parties to the beneficiary or to a linked third party specifically to be used for the action, and
      2. 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.

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##### The following are however not considered receipts:

1. income generated by exploiting the action’s results (see Article 28);
2. financial contributions by third parties, if they may be used to cover costs other than the eligible costs (see Article 6);
3. 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.

* + 1. **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 JU 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.
  1. **Revised final grant amount — Calculation**

If — after the payment of the balance (in particular, after checks, reviews, audits or investigations; see Article 22) — the JU 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 JU 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 JU 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

* 1. **General conditions for costs to be eligible**

‘**Eligible costs**’ are costs that meet the following criteria:

1. for **actual costs**:

##### they must be actually incurred by the beneficiary;

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##### 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);

* 1. they must be indicated in the estimated budget set out in Annex 2;
  2. they must be incurred in connection with the action as described in Annex 1 and necessary for its implementation;
  3. 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;
  4. they must comply with the applicable national law on taxes, labour and social security, and
  5. they must be reasonable, justified and must comply with the principle of sound financial management, in particular regarding economy and efficiency;

1. for **unit costs**:

##### 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 and Article 6.2.D.5)

multiplied by

the number of actual units};

##### 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);

1. for **flat-rate costs**:

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

* 1. 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.
  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:

* + 1. direct personnel costs;
    2. direct costs of subcontracting;
    3. not applicable;
    4. other direct costs;

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##### indirect costs;

* + 1. not applicable.

‘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 Types of eligible personnel costs**

* 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 entities5 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:

* + 1. 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;
    2. 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’ means any part of the remuneration which exceeds what the person would be paid for time worked in projects funded by national schemes.

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

1. if the person works full time and exclusively on the action during the full year: up to EUR 8 000;
2. 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
3. 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)},

5 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.

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multiplied by

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

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

##### the person works under conditions similar to those of an employee (in particular regarding the way the work is organised, the tasks that are performed and the premises where they are performed);

* + 1. the result of the work carried out belongs to the beneficiary (unless exceptionally agreed otherwise), and
    2. the costs are not significantly different from those for personnel performing similar tasks under an employment contract with the beneficiary.
  1. The **costs of personnel seconded by a third party against payment** are eligible personnel costs, if the conditions in Article 11.1 are met.

##### **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.

* 1. **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.

#### 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 JU, 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 are:

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

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

The ‘**hourly rate**’ is one of the following:

* + 1. for personnel costs declared as **actual costs** (i.e. budget categories A.1, A.2, A.3): 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:

* + - 1. ‘fixed number of hours’: 1 720 hours for persons working full time (or corresponding pro-rata for persons not working full time);
      2. ‘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;

* + - 1. ‘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.

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##### 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;

* + 1. for personnel costs declared on the basis of **unit costs** (i.e. budget categories A.1, A.2, A.4, A.5): the hourly rate is one of the following:
       1. 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
       2. 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).

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**B. Direct costs of subcontracting** (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.

**C. Direct costs of providing financial support to third parties**

Not applicable

**D. Other direct costs**

* 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.
  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.

* 1. **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:
     1. purchased specifically for the action and in accordance with Article 10.1.1 or
     2. 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.

* 1. **Capitalised and operating costs of ‘large research infrastructure’**6 directly used for the action are eligible, if:

##### the value of the large research infrastructure represents at least 75% of the total fixed assets (at historical value in its last closed balance sheet before the date of the signature of

6 ‘**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.

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##### the Agreement or as determined on the basis of the rental and leasing costs of the research infrastructure7);

* + 1. the beneficiary’s methodology for declaring the costs for large research infrastructure has been positively assessed by the Commission (‘**ex-ante assessment**’);
    2. the beneficiary declares as direct eligible costs only the portion which corresponds to the duration of the action and the rate of actual use for the purposes of the action, and
    3. they comply with the conditions as further detailed in the annotations to the H2020 grant agreements.
  1. **Costs of internally invoiced goods and services** directly used for the action are eligible, if:

##### they are declared on the basis of a unit cost calculated in accordance with the beneficiary’s usual cost accounting practices;

* + 1. the cost accounting practices used are applied in a consistent manner, based on objective criteria, regardless of the source of funding;
    2. the unit cost is calculated using the actual costs for the good or service recorded in the beneficiary’s accounts, excluding any ineligible cost or costs included in other budget categories.

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

* + 1. the unit cost excludes any costs of items which are not directly linked to the production of the invoiced goods or service.

‘Internally invoiced goods and services’ means goods or services which are provided by the beneficiary directly for the action and which the beneficiary values on the basis of its usual cost accounting practices.

**E. Indirect costs**

**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:

1. costs of subcontracting and
2. costs of in-kind contributions provided by third parties which are not used on the beneficiary’s premises;

7 For the definition, see Article 2(6) of the H2020 Framework Programme Regulation No 1291/2013: ‘**Research infrastructure**’ are facilities, resources and services that are used by the research communities to conduct research and foster innovation in their fields. Where relevant, they may be used beyond research, e.g. for education or public services. They include: major scientific equipment (or sets of instruments); knowledge-based resources such as collections, archives or scientific data; e-infrastructures such as data and computing systems and communication networks; and any other infrastructure of a unique nature essential to achieve excellence in research and innovation. Such infrastructures may be ‘single-sited’, ‘virtual’ or ‘distributed’.

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##### not applicable;

1. not applicable.

Beneficiaries receiving an operating grant8 financed by the EU or Euratom budget cannot declare indirect costs for the period covered by the operating grant, unless they can demonstrate that the operating grant does not cover any costs of the action.

**F. Specific cost category(ies)**

Not applicable

* 1. **Conditions for costs of linked third parties to be eligible**

**Costs incurred by linked third parties** are eligible if they fulfil — *mutatis mutandis* — the general and specific conditions for eligibility set out in this Article (Article 6.1 and 6.2) and Article 14.1.1.

#### 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 or linked third party), 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.

#### Ineligible costs

‘**Ineligible costs**’ are:

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

* + - 1. costs related to return on capital;
      2. debt and debt service charges;
      3. provisions for future losses or debts;
      4. interest owed;
      5. doubtful debts;
      6. currency exchange losses;
      7. bank costs charged by the beneficiary’s bank for transfers from the JU;
      8. excessive or reckless expenditure;

8 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.

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##### deductible VAT;

* + - 1. costs incurred during suspension of the implementation of the action (see Article 49);
    1. costs declared under another JU, EU or Euratom grant (including other grants awarded by the JU, grants awarded by a Member State and financed by the EU or Euratom budget and grants awarded by bodies other than the JU 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, unless it can demonstrate that the operating grant does not cover any costs of the action.
  1. **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**

* 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.

* 1. **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);

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##### 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);
* call upon international partners to implement action tasks described in Annex 1 (see Article 14a).

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

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

Not applicable

**ARTICLE 10 — PURCHASE OF GOODS, WORKS OR SERVICES**

* 1. **Rules for purchasing goods, works or services**
     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 JU, 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.

* + 1. Beneficiaries that are ‘contracting authorities’ within the meaning of Directive 2004/18/EC9 (or 2014/24/EU10) or ‘contracting entities’ within the meaning of Directive 2004/17/EC11 (or 2014/25/EU12) 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.

9 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).

10 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).

11 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)

12 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).

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

* 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 JU 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 JU, 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.

* 1. **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).

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**

* 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 JU 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 JU, the Commission, the European Court of Auditors (ECA)

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##### and the European Anti-Fraud Office (OLAF) can exercise their rights under Articles 22 and 23 also towards the third parties.

* 1. **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**

* 1. **Rules for subcontracting action tasks**
     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 JU 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 JU, 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.

* + 1. 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.

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#### ARTICLE 14 — IMPLEMENTATION OF ACTION TASKS BY LINKED THIRD PARTIES

* 1. **Rules for calling upon linked third parties to implement part of the action**
     1. The following **affiliated entities**12 and **third parties with a legal link to a beneficiary**13

(‘**linked third parties**’) may implement the action tasks attributed to them in Annex 1:

##### KONIKER S COOP (KONIKER), affiliated or linked to FARR

* + - * FAGOR AOTEK S. COOP (FAGOR AOTEK), affiliated or linked to FAUT
      * ALMA MATER STUDIORUM - UNIVERSITA DI BOLOGNA (UNIBO), affiliated or linked to IUNET
      * UNIVERSITA DEGLI STUDI DI MODENA E REGGIO EMILIA (UNIMORE), affiliated or

linked to IUNET

* + - * POLITECNICO DI MILANO (POLIMI), affiliated or linked to IUNET
      * UNIVERSITA DI PISA (UNIPI), affiliated or linked to IUNET
      * FACHHOCHSCHULE BURGENLAND GMBH (FHB), affiliated or linked to FB

The linked third parties may declare as eligible the costs they incur for implementing the action tasks in accordance with Article 6.3.

The beneficiaries must ensure that the JU, 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 linked third parties.

* + 1. The beneficiaries must ensure that their obligations under Articles 18, 20, 35, 36 and 38 also apply to their linked third parties.
  1. **Consequences of non-compliance**

12 For the definition see Article 2.1(2) 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
    - directly or indirectly controlling a participant. ‘Control’ may take any of the following forms:

1. 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;
2. 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:
3. 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;
4. the legal entities concerned are owned or supervised by the same public body.

13 ‘**Third party with a legal link to a beneficiary**’ is any legal entity which has a legal link to the beneficiary implying collaboration that is not limited to the action.

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##### If any obligation under Article 14.1.1 is breached, the costs of the linked third party will be ineligible (see Article 6) and will be rejected (see Article 42).

If any obligation under Article 14.1.2 is breached, the grant may be reduced (see Article 43). Such breaches may also lead to any of the other measures described in Chapter 6.

**ARTICLE 14a — IMPLEMENTATION OF ACTION TASKS BY INTERNATIONAL PARTNERS**

Not applicable

**ARTICLE 15 — FINANCIAL SUPPORT TO THIRD PARTIES**

* 1. **Rules for providing financial support to third parties**

Not applicable

* 1. **Financial support in the form of prizes**

Not applicable

* 1. **Consequences of non-compliance**

Not applicable

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

* 1. **Rules for providing trans-national access to research infrastructure**

Not applicable

* 1. **Rules for providing virtual access to research infrastructure**

Not applicable

* 1. **Consequences of non-compliance**

Not applicable

**SECTION 2 RIGHTS AND OBLIGATIONS RELATED TO THE GRANT ADMINISTRATION**

**ARTICLE 17 — GENERAL OBLIGATION TO INFORM**

* 1. **General obligation to provide information upon request**

The beneficiaries must provide — during implementation of the action or afterwards and in accordance

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##### 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.

* 1. **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 JU and the other beneficiaries — of any of the following:

* + 1. **events** which are likely to affect significantly or delay the implementation of the action or the EU's or the JU's financial interests, in particular:
       1. changes in its legal, financial, technical, organisational or ownership situation or those of its linked third parties and
       2. changes in the name, address, legal form, organisation type of its linked third parties;
    2. **circumstances** affecting:

##### the decision to award the grant or

* + - 1. compliance with requirements under the Agreement.
  1. **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**

* 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 Article 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 JU or the Commission may accept non-original documents if it considers that they offer a comparable level of assurance.

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#### 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.

* + 1. **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:

* + - 1. 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;
      2. for **unit costs**: adequate records and other supporting documentation to prove the number of units declared. 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 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.

##### The beneficiaries and linked third parties may submit to the JU, for approval by the Commission, 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.

* + - 1. 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 JU or 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.

##### For costs declared by linked third parties (see Article 14), it is the beneficiary that must keep the

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##### originals of the financial statements and the certificates on the financial statements of the linked third parties.

**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**

* 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.

* 1. **Consequences of non-compliance**

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

**ARTICLE 20 — REPORTING — PAYMENT REQUESTS**

* 1. **Obligation to submit reports**

The coordinator must submit to the JU (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).

* 1. **Reporting periods**

The action is divided into the following ‘**reporting periods**’:

##### RP1: from month 1 to month 12

* + - RP2: from month 13 to month 24
    - RP3: from month 25 to month 39
  1. **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:

1. a ‘**periodic technical report**’ containing:
   1. an **explanation of the work carried out** by the beneficiaries;

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##### 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;

* 1. a **summary** for publication by the JU;

##### the answers to the ‘**questionnaire**’, covering issues related to the action implementation and the economic and societal impact, notably in the context of the JU and the Horizon 2020 key performance indicators and JU and the Horizon 2020 monitoring requirements;

1. a ‘**periodic financial report**’ containing:
   1. an ‘**individual financial statement**’ (see Annex 4) from each beneficiary and from each linked third party, 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 and linked third parties 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 JU.

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 and each linked third party 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);
  1. 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

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##### 12) from each beneficiary and from each linked third party, for the reporting period concerned;

* 1. not applicable;
  2. 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**.

#### 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:

1. a ‘**final technical report**’ with a **summary** for publication containing:

##### an overview of the results and their exploitation and dissemination;

* 1. the conclusions on the action, and
  2. the socio-economic impact of the action;

1. a ‘**final financial report**’ containing:
   1. 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

##### a ‘**certificate on the financial statements**’ (drawn up in accordance with Annex 5) for each beneficiary and for each linked third party, 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).

* 1. **Information on cumulative expenditure incurred**

Not applicable

* 1. **Currency for financial statements and conversion into euro**

Financial statements must be drafted in euro.

Beneficiaries and linked third parties 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.

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##### Beneficiaries and linked third parties with accounting established in euro must convert costs incurred in another currency into euro according to their usual accounting practices.

* 1. **Language of reports**

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

* 1. **Consequences of non-compliance**

If the reports submitted do not comply with this Article, the JU 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 JU may terminate the Agreement (see Article 50) or apply any of the other measures described in Chapter 6.

**ARTICLE 21 — PAYMENTS AND PAYMENT ARRANGEMENTS**

* 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).

#### 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 JU until the payment of the balance.

The amount of the pre-financing payment will be EUR **12 139 443.57** (twelve million one hundred and thirty nine thousand four hundred and forty three EURO and fifty seven eurocents).

The JU 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 **1 138 072.83** (one million one hundred and thirty eight thousand seventy two EURO and eighty three eurocents), corresponding to 5% of the maximum grant amount (see Article 5.1), is retained by the JU from the pre-financing payment and transferred into the ‘**Guarantee Fund**’.

* 1. **Interim payments — Amount — Calculation**

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

The JU 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 JU in the following steps: Step 1 — Application of the reimbursement rates

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

* + 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 and the linked third parties (see Article 20) and approved by the JU (see above) for the concerned reporting period.

* + 1. **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}**}**.

#### 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 JU 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 JU 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:

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**{**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 JU up to the maximum JU contribution indicated, for that beneficiary, in the estimated budget (see Annex 2).

* 1. **Notification of amounts due**

When making payments, the JU 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.

* 1. **Currency for payments**

The JU will make all payments in euro.

* 1. **Payments to the coordinator — Distribution to the beneficiaries**

Payments will be made to the coordinator.

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

The coordinator must distribute the payments between the beneficiaries without unjustified delay. Pre-financing may however be distributed only:

* + 1. if the minimum number of beneficiaries set out in the call for proposals has acceded to the Agreement (see Article 56) and
    2. to beneficiaries that have acceded to the Agreement (see Article 56).
  1. **Bank account for payments**

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##### All payments will be made to the following bank account:

Name of bank: DANSKE BANK

Full name of the account holder: LULEA TEKNISKA UNIVERSITET IBAN code: SE3012000000012810118183

* 1. **Costs of payment transfers**

The cost of the payment transfers is borne as follows:

* the JU 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.
  1. **Date of payment**

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

* 1. **Consequences of non-compliance**
     1. If the JU 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.

* + 1. 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**

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#### Checks, reviews and audits by the JU and the Commission 22.1.1 Right to carry out checks

##### The JU 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 JU may be assisted by external persons or bodies.

The JU may also request additional information in accordance with Article 17. The JU 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.

* + 1. **Right to carry out reviews**

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

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

* + 1. **Right to carry out audits**

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

* 1. **Investigations by the European Anti-Fraud Office (OLAF)**

Under Regulations No 883/201318 and No 2185/96 19 (and in accordance with their provisions and

18 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).

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##### procedures), and Article 49 of the JU Financial Rules20, 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.

* 1. **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 49 of the JU Financial Rules, 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

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

* + 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.

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 JU, 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.

* + 1. **Findings in other grants**

The JU or the Commission may extend findings from other grants to this grant (‘**extension of findings from other grants to this grant**’), if:

##### the beneficiary concerned is found, in other JU, 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

19 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).

20 The JU Financial Rules are available on the JU's website.

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##### 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).

* + 1. **Procedure**

The JU or 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.

* + - 1. If the findings concern **eligibility of costs**: the formal notification will include:

##### an invitation to submit observations on the list of grants affected by the findings;

* + - * 1. the request to submit **revised financial statements** for all grants affected;

##### the **correction rate for extrapolation** established by the JU or the Commission on the basis of the systemic or recurrent errors, to calculate the amounts to be rejected if the beneficiary concerned:

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

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 JU or the Commission in justified cases.

The JU or 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.
  + - 1. If the findings concern **substantial errors**, **irregularities or fraud** or **serious breach of obligations**: the formal notification will include:

##### an invitation to submit observations on the list of grants affected by the findings and

* + - * 1. the flat-rate the JU or the Commission intends to apply according to the principle of proportionality.

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

The JU or 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**

* 1. **Right to evaluate the impact of the action**

The JU or 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 JU or 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.

* 1. **Consequences of non-compliance**

If a beneficiary breaches any of its obligations under this Article, the JU 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**

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#### 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 activities21.

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 JU may apply any of the measures described in Chapter 6.

**SUBSECTION 2 RIGHTS AND OBLIGATIONS RELATED TO BACKGROUND** **ARTICLE 24 — AGREEMENT ON BACKGROUND**

* 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:

* + 1. is held by the beneficiaries before they acceded to the Agreement, and
    2. is needed to implement the action or exploit the results.
  1. **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**

* 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.

21 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.

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##### Waivers of access rights are not valid unless in writing.

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

* 1. **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 —:

* + 1. 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
    2. agreed with the other beneficiaries that access would not be on a royalty-free basis.
  1. **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.

* 1. **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 entities22 established in an EU Member State or ‘**associated country**’23, 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.

* 1. **Access rights for third parties**

22 [For the definition, see ‘affiliated entity’ footnote (Article 14.1).](#_bookmark43)

23 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.

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##### Not applicable

* 1. **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**

#### 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.

* 1. **Joint ownership by several beneficiaries**

Two or more beneficiaries own results jointly if:

* + 1. they have jointly generated them and
    2. it is not possible to:
       1. establish the respective contribution of each beneficiary, or
       2. 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:

1. at least 45 days advance notice and
2. 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).

* 1. **Rights of third parties (including personnel)**

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##### 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.

* 1. **JU ownership, to protect results**
     1. The JU 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:
        1. the lack of protection is because protecting the results is not possible, reasonable or justified (given the circumstances);
        2. the lack of protection is because there is a lack of potential for commercial or industrial exploitation, or
        3. 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 JU 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 JU 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 JU takes a positive decision, until it has taken the necessary steps to protect the results.

* + 1. The JU 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:
       1. the protection is stopped because of a lack of potential for commercial or industrial exploitation;
       2. 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 JU 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 JU decides to assume ownership, it will formally notify the beneficiary concerned within 45 days of receiving notification.

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#### 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 JU FUNDING AND SUPPORT FROM JU MEMBERS**

* 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:

* + 1. the results can reasonably be expected to be commercially or industrially exploited and
    2. 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.

* 1. **JU 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 JU may — under certain conditions (see Article 26.4) — assume ownership to ensure their (continued) protection.

* 1. **Information on JU funding and support from JU members**

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

“The project leading to this application has received funding from the ECSEL Joint Undertaking (JU) under grant agreement No 826452. The JU receives support from the European Union’s Horizon 2020 research and innovation programme and Sweden, Austria, Spain, Poland, Germany, Italy, Czech Republic, Netherlands, Belgium, Latvia, Romania, France, Hungary, Portugal, Finland, Turkey, Norway, Switzerland”.

#### 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**

* 1. **Obligation to exploit the results**

Each beneficiary must — up to four years after the period set out in Article 3 — take measures aiming

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##### to ensure ‘**exploitation**’ of its results (either directly or indirectly, in particular through transfer or licensing; see Article 30) by:

* + 1. using them in further research activities (outside the action);
    2. developing, creating or marketing a product or process;
    3. creating and providing a service, or
    4. using them in standardisation activities.

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

* 1. **Results that could contribute to European or international standards — Information on JU funding and support from JU members**

If results are incorporated in a standard, the beneficiary concerned must — unless the JU 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 ECSEL Joint Undertaking (JU) under grant agreement No 826452. The JU receives support from the European Union’s Horizon 2020 research and innovation programme and Sweden, Austria, Spain, Poland, Germany, Italy, Czech Republic, Netherlands, Belgium, Latvia, Romania, France, Hungary, Portugal, Finland, Turkey, Norway, Switzerland”.

#### 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 JU FUNDING AND SUPPORT FROM JU MEMBERS**

* 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

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##### 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 JU before dissemination takes place.
  1. **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:

* + 1. 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.

* + 1. ensure open access to the deposited publication — via the repository — at the latest:
       1. on publication, if an electronic version is available for free via the publisher, or
       2. within six months of publication (twelve months for publications in the social sciences and humanities) in any other case.
    2. 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 “ECSEL Joint Undertaking”, “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.
  1. **Open access to research data**

Not applicable;

* 1. **Information on JU funding and support from JU members — Obligation and right to use the JU logo and the EU emblem**

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

* + 1. display the JU logo and
    2. display the EU emblem and

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##### include the following text:

“This project has received funding from the ECSEL Joint Undertaking (JU) under grant agreement No 826452. The JU receives support from the European Union’s Horizon 2020 research and innovation programme and Sweden, Austria, Spain, Poland, Germany, Italy, Czech Republic, Netherlands, Belgium, Latvia, Romania, France, Hungary, Portugal, Finland, Turkey, Norway, Switzerland”.

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

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

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

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

* 1. **Disclaimer excluding JU responsibility**

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

* 1. **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**

* 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.

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#### Granting licenses

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

* + 1. this does not impede the access rights under Article 31 and
    2. 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.

* 1. **JU right to object to transfers or licensing**

Not applicable

* 1. **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**

* 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.

* 1. **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.

* 1. **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.

* 1. **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

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##### 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.

* 1. **Access rights for the JU, the EU institutions, other EU bodies, offices or agencies and EU Member States**

The beneficiaries must give access to their results — on a royalty-free basis — to the JU and to EU institutions, other EU 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).

* 1. **Access rights for third parties**

Not applicable

* 1. **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**

**ARTICLE 32 — RECRUITMENT AND WORKING CONDITIONS FOR RESEARCHERS**

* 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 Researchers25, in particular regarding:

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

25 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).

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

* 1. **Consequences of non-compliance**

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

**ARTICLE 33 — GENDER EQUALITY**

* 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.

* 1. **Consequences of non-compliance**

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

**ARTICLE 34 — ETHICS AND RESEARCH INTEGRITY**

* 1. **Obligation to comply with ethical and research integrity principles**

The beneficiaries must carry out the action in compliance with:

* + 1. ethical principles (including the highest standards of research integrity) and
    2. 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:

1. aim at human cloning for reproductive purposes;
2. 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
3. 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.

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##### In addition, the beneficiaries must respect the fundamental principle of research integrity — as set out, for instance, in the European Code of Conduct for Research Integrity26.

This implies compliance with the following fundamental principles:

* **reliability** in ensuring the quality of research reflected in the design, the methodology, the analysis and the use of resources;
* **honesty** in developing, undertaking, reviewing, reporting and communicating research in a transparent, fair and unbiased way;
* **respect** for colleagues, research participants, society, ecosystems, cultural heritage and the environment;
* **accountability** for the research from idea to publication, for its management and organisation, for training, supervision and mentoring, and for its wider impacts

and means that beneficiaries must ensure that persons carrying out research tasks follow the good research practices and refrain from the research integrity violations described in this Code.

This does not change the other obligations under this Agreement or obligations under applicable international, EU or national law, all of which still apply.

* 1. **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:

* + 1. any ethics committee opinion required under national law and
    2. 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 JU (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).

* 1. **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 JU (see Article 52).

26 European Code of Conduct for Research Integrity of ALLEA (All European Academies) <http://ec.europa.eu/research/participants/data/ref/h2020/other/hi/h2020-ethics_code-of-conduct_en.pdf>

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#### 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**

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

* 1. **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**

* 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 JU 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:

* + 1. need to know to implement the Agreement and
    2. are bound by an obligation of confidentiality.

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

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

1. this is necessary to implement the Agreement or safeguard the EU's or JU's financial interests and
2. the recipients of the information are bound by an obligation of confidentiality. The confidentiality obligations no longer apply if:
3. the disclosing party agrees to release the other party;
4. 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;
5. the recipient proves that the information was developed without the use of confidential information;
6. the information becomes generally and publicly available, without breaching any confidentiality obligation, or
7. the disclosure of the information is required by EU or national law.
   1. **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

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

##### Not applicable

* 1. **Consequences of non-compliance**

Not applicable

**ARTICLE 38 — PROMOTING THE ACTION — VISIBILITY OF JU FUNDING AND SUPPORT FROM JU MEMBERS**

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#### 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 JU (see Article 52).

* + 1. **Information on JU funding and support from JU members — Obligation and right to use the JU logo and the EU emblem**

Unless the JU 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:

* + - 1. display the JU logo and
      2. display the EU emblem and
      3. include the following text:

For communication activities:

“This project has received funding from the ECSEL Joint Undertaking (JU) under grant agreement No 826452. The JU receives support from the European Union’s Horizon 2020 research and innovation programme and Sweden, Austria, Spain, Poland, Germany, Italy, Czech Republic, Netherlands, Belgium, Latvia, Romania, France, Hungary, Portugal, Finland, Turkey, Norway, Switzerland”.

For infrastructure, equipment and major results:

“This *[infrastructure][equipment][insert type of result]* is part of a project that has received funding from the ECSEL Joint Undertaking (JU) under grant agreement No 826452. The JU receives support from the European Union’s Horizon 2020 research and innovation programme and Sweden, Austria, Spain, Poland, Germany, Italy, Czech Republic, Netherlands, Belgium, Latvia, Romania, France, Hungary, Portugal, Finland, Turkey, Norway, Switzerland”.

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

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

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

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

* + 1. **Disclaimer excluding JU responsibility**

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

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#### Communication activities by the JU

* + 1. **Right to use beneficiaries’ materials, documents or information**

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

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

* + - 1. **use for its own purposes** (in particular, making them available to persons working for the JU 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);
      2. **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);
      3. **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);
      4. translation;
      5. giving **access in response to individual requests** under Regulation No 1049/200128, without the right to reproduce or exploit;

##### **storage** in paper, electronic or other form;

* + - 1. **archiving**, in line with applicable document-management rules, and
      2. 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 JU.

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 JU will insert the following information:

28 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.

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“© – [year] – [name of the copyright owner]. All rights reserved. Licensed to the ECSEL Joint Undertaking 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**

* 1. **Processing of personal data by the JU and the Commission**

Any personal data under the Agreement will be processed by the JU or the Commission under Regulation No 45/200129 and according to the ‘notifications of the processing operations’ to the Data Protection Officer (DPO) of the JU or the Commission (publicly accessible in the DPO register).

Such data will be processed by the ‘**data controller**’ of the JU or the Commission for the purposes of implementing, managing and monitoring the Agreement or protecting the financial interests of the JU, 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 data controller, via the contact point indicated in the ‘privacy statement’ that are published on the JU and the Commission websites.

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

* 1. **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 JU or the Commission. For this purpose, they must provide them with the privacy statement(s) (see above), before transmitting their data to the JU or the Commission.

* 1. **Consequences of non-compliance**

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

**ARTICLE 40 — ASSIGNMENTS OF CLAIMS FOR PAYMENT AGAINST THE JU**

29 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).

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

If the JU 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 JU.

**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**

* 1. **Roles and responsibility towards the JU**

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 JU funding for doing so), unless the JU expressly relieves them of this obligation.

The **financial responsibility** of each beneficiary is governed by Article 44.

#### Internal division of roles and responsibilities

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

1. Each **beneficiary** must:

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

* 1. inform the coordinator immediately of any events or circumstances likely to affect significantly or delay the implementation of the action (see Article 17);
  2. submit to the coordinator in good time:
     + individual financial statements for itself and its linked third parties 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);

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

1. The **coordinator** must:

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

* 1. act as the intermediary for all communications between the beneficiaries and the JU (in particular, providing the JU with the information described in Article 17), unless the Agreement specifies otherwise;
  2. request and review any documents or information required by the JU and verify their completeness and correctness before passing them on to the JU;
  3. submit the deliverables and reports to the JU (see Articles 19 and 20);
  4. ensure that all payments are made to the other beneficiaries without unjustified delay (see Article 21);
  5. inform the JU of the amounts paid to each beneficiary, when required under the Agreement (see Articles 44 and 50) or requested by the JU.

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

* 1. **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 JU 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

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##### 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 JU will — 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).

#### 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 JU 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 JU of its disagreement and the reasons why.

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

**42.3 Effects**

If the JU 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 JU 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 JU — **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.

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

* + - 1. substantial errors, irregularities or fraud or
      2. 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
    1. 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).
  1. **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 JU 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 JU 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 JU 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 JU 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).

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##### If the JU 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 JU will recover the difference (see Article 44).

**ARTICLE 44 — RECOVERY OF UNDUE AMOUNTS**

* 1. **Amount to be recovered — Calculation — Procedure**

The JU 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 (including undue amounts paid by the JU for costs declared by its linked third parties), except for the amount retained for the Guarantee Fund (see Article 21.4).

* + 1. **Recovery after termination of a beneficiary’s participation**

If recovery takes place after termination of a beneficiary’s participation (including the coordinator), the JU 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 JU will **recover** the amount:

* + - 1. by ‘**offsetting**’ it — without the beneficiary’s consent — against any amounts owed to the beneficiary concerned by the JU.

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

* + - 1. Not applicable;
      2. by **taking legal action** (see Article 57)

##### 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 JU 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/EC30 applies.

* + 1. **Recovery at payment of the balance**

30 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).

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##### If the payment of the balance takes the form of a recovery (see Article 21.4), the JU 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 JU 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.

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

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

* + - 1. 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 JU multiplied by the reimbursement rate set out in Article 5.2 for the beneficiary concerned

plus

its linked third parties’ costs declared in the final summary financial statement and approved by the JU multiplied by the reimbursement rate set out in Article 5.2 for each linked third party concerned}

divided by

the JU 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}**}**.

##### 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:

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**{**{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 JU will **recover** the amount:

1. by ‘**offsetting**’ it — without the beneficiary’s consent — against any amounts owed to the beneficiary concerned by the JU.

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

1. by **drawing on the Guarantee Fund**. The JU will formally notify the beneficiary concerned the debit note on behalf of the Guarantee Fund and recover the amount:
   1. not applicable;
   2. by **taking legal action** (see Article 57).

##### 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 JU 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.

* + 1. **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 JU.

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 JU multiplied by the reimbursement rate set out in Article 5.2 for the beneficiary concerned

plus

its linked third parties’ costs declared in the final summary financial statement and approved by the JU multiplied by the reimbursement rate set out in Article 5.2 for each linked third party concerned}

divided by

the JU contribution for the action calculated according to Article 5.3.1**}** multiplied by

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the final grant amount (see Article 5.3)**}**.

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

The JU 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 JU 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 JU will **recover** the amount:

* + - 1. by ‘**offsetting**’ it — without the beneficiary’s consent — against any amounts owed to the beneficiary concerned by the JU.

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

* + - 1. by **drawing on the Guarantee Fund**. The JU will formally notify the beneficiary concerned the debit note on behalf of the Guarantee Fund and recover the amount:
         1. not applicable;
         2. by **taking legal action** (see Article 57).

##### 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 JU 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 JU may also adopt administrative sanctions under Articles 33 and 35 of the JU Financial Rules read in conjunction with Articles 106 and 131(4) of the Financial Regulation No 966/2012 (i.e. exclusion from future procurement contracts, grants, prizes and expert contracts and/or financial penalties).

**SECTION 2 LIABILITY FOR DAMAGES**

**ARTICLE 46 — LIABILITY FOR DAMAGES**

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#### Liability of the JU

##### The JU 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 JU 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.

* 1. **Liability of the beneficiaries**

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

* + 1. it does not comply with the provisions of the Agreement (see Article 20);
    2. the technical or financial reports have not been submitted or are not complete or additional information is needed, or
    3. there is doubt about the eligibility of the costs declared in the financial statements and additional checks, reviews, audits or investigations are necessary.
  1. **Procedure**

The JU will formally notify the coordinator of the suspension and the reasons why. The suspension will **take effect** the day notification is sent by the JU (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 JU 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 JU 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**

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##### The JU 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:

* + 1. 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:
       1. substantial errors, irregularities or fraud or
       2. 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
    2. a beneficiary (or a natural person who has the power to represent or take decision on its behalf) has committed — in other JU, 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 JU 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.
  1. **Procedure**

Before suspending payments, the JU 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 JU 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 JU.

If the conditions for resuming payments are met, the suspension will be **lifted**. The JU 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 and its linked third parties. 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**

* 1. **Suspension of the action implementation, by the beneficiaries**

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#### 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.

* + 1. **Procedure**

The coordinator must immediately formally notify to the JU 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 JU.

Once circumstances allow for implementation to resume, the coordinator must immediately formally notify the JU 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).

* 1. **Suspension of the action implementation, by the JU 49.2.1 Conditions**

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

* + 1. 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:
       1. substantial errors, irregularities or fraud or
       2. 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);
    2. a beneficiary (or a natural person who has the power to represent or take decisions on its behalf) has committed — in other JU, 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

##### the action is suspected of having lost its scientific or technological relevance.

* + 1. **Procedure**

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##### Before suspending implementation of the action, the JU 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 JU 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 JU (see Article 46).

Suspension of the action implementation does not affect the JU’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**

* 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 JU (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 JU 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**

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

1. the final report (see Article 20.4).

If the JU 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 JU 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.

* 1. **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 JU (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 JU 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**

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

1. a report on the distribution of payments to the beneficiary concerned and
2. 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 JU (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 JU, the Agreement is **amended** to introduce the necessary changes (see Article 55).

The JU 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 and its linked third parties in the termination report and approved by the JU.

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 JU 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 JU 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 JU will draw upon the Guarantee Fund to pay the

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##### 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 JU 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 JU the amount due and the JU 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 JU 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 JU the amount due. The JU 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 JU 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 JU 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.

* 1. **Termination of the Agreement or the participation of one or more beneficiaries, by the JU**

**50.3.1 Conditions**

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

1. one or more beneficiaries do not accede to the Agreement (see Article 56);
2. a change to their legal, financial, technical, organisational or ownership situation (or those of its linked third parties) is likely to substantially affect or delay the implementation of the action or calls into question the decision to award the grant;

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##### 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);

1. implementation of the action is prevented by force majeure (see Article 51) or suspended by the coordinator (see Article 49.1) and either:
   1. resumption is impossible, or
   2. the necessary changes to the Agreement would call into question the decision awarding the grant or breach the principle of equal treatment of applicants;
2. 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;
3. 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;
4. a beneficiary does not comply with the applicable national law on taxes and social security;
5. the action has lost scientific or technological relevance;
6. not applicable;
7. not applicable;
8. 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;
9. a beneficiary (or a natural person who has the power to represent or take decisions on its behalf) has committed:
   1. substantial errors, irregularities or fraud or
   2. 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);
10. a beneficiary (or a natural person who has the power to represent or take decisions on its behalf) has committed — in other JU, 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);
11. despite a specific request by the JU, a beneficiary does not request — through the coordinator

— an amendment to the Agreement to end the participation of one of its linked third parties or international partners that is in one of the situations under points (e), (f), (g), (k), (l) or (m) and to reallocate its tasks.

* + 1. **Procedure**

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##### Before terminating the Agreement or participation of one or more beneficiaries, the JU 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 JU of the measures to ensure compliance with the obligations under the Agreement.

If the JU 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**

1. for **termination of the Agreement**:

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

* 1. a periodic report (for the last open reporting period until termination; see Article 20.3) and
  2. 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 JU 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 JU 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 JU’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 JU (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.

1. for **termination of the participation of one or more beneficiaries**:

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

* 1. a report on the distribution of payments to the beneficiary concerned;
  2. 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
  3. 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 JU (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 JU, the Agreement is **amended** to introduce the necessary changes (see Article 55).

The JU 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 and its linked third parties in the termination report and approved by the JU.

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 JU 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.

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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 JU 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 JU 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 JU 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 JU the amount due and the JU 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 JU 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 JU the amount due. The JU 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 JU 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 JU 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:

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##### 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**

* 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.

All communication must be made through the Participant Portal **electronic** exchange system and using the forms and templates provided there.

If — after the payment of the balance — the JU finds that a formal notification was not accessed, a second formal notification will be made by registered post with proof of delivery (‘formal notification on **paper**’). Deadlines will be calculated from the moment of the second notification.

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

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##### (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 JU and Commission websites.

* 1. **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.

* 1. **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 JU 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 JU** must be sent to the official mailing address indicated on the JU’s website.

##### 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**

* 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.

* 1. **Privileges and immunities**

Not applicable

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#### ARTICLE 54 — CALCULATION OF PERIODS, DATES AND DEADLINES

##### In accordance with Regulation No 1182/7131, 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.

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, and
* for a change of coordinator without its agreement: the opinion of the coordinator (or proof that this opinion has been requested in writing).

The JU 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 JU 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.

31 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).

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#### ARTICLE 56 — ACCESSION TO THE AGREEMENT

* 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 JU’s right to terminate the Agreement (see Article 50).
  1. **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**

* 1. **Applicable law**

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

* 1. **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).

As an exception, if such a dispute is between the JU and ARCELIK A.S., JOTNE EPM TECHNOLOGY AS, HOGSKOLEN I OSTFOLD, NORGES TEKNISK- NATURVITENSKAPELIGE UNIVERSITET NTNU, TELLU IOT AS, SAP NORWAY AS, EQUA

SOLUTIONS AG, the competent Belgian courts have sole jurisdiction.

If a dispute concerns administrative sanctions or offsetting, the beneficiaries must bring action before the General Court — or, on appeal, the Court of Justice of the European Union — under Article 263 TFEU.

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#### ARTICLE 58 — ENTRY INTO FORCE OF THE AGREEMENT

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

SIGNATURES

For the coordinator For the JU

Birgitta BERGVALL-KÅREBORN with ECAS id nbergvbi signed in the Participant Portal on 09/05/2019 at 07:12:12 (transaction id SigId-862- pzqUmJ7JDeSO8osAuUPSqgPpDgn5k41Ug9CVOCvi2nV f9I45ScYKLd4GDwYpHelG7RZ7XvX6T88qd9E9zze37sm- rS0vSrmBGYCAF7GxdOQa8O- SIJrFtHUzpV5IaNiPzVMJ4rWxRq8h7zJw8j3K0LEfp4G). Timestamp by third party at

Thu May 09 08:12:19 CEST 2019

Signed by Bert DE COLVENAER with ECAS id icolvber as an authorised representative on 10-05-2019 09:20:40 (transaction id SigId-4287- F6SN3kzzPzx7FGVQpKTD3pOAzopGKpGkhD19c5RuTqq zmaJrzzlaCgD4WJrFGXnxeEkE8pYyfiXbYNGxAXb0IQZ4- rS0vSrmBGYCAF7GxdOQa8O- 7ful73gdC2WOzIADcFoH6HooOnzhQ62CSrvfXBiqU0cm) Fri May 10 09:20:44 CEST 2019

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#### ANNEX 1 (part A) ECSEL Innovation Action

**NUMBER — 826452 — Arrowhead Tools**

XXXXX

6

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**AEE - INSTITUT FUR NACHHALTIGE TECHNOLOGIEN (AEE INTEC)**, established in

##### FELDGASSE 19, GLEISDORF 8200, Austria, (‘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** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Ewald SELVICKA with ECAS id nselview signed in the Participant Portal on 13/05/2019 at 14:48:04 (transaction id SigId-13118-

zXjPkyc4gr9MYfRZLKbNN8XD1yLvMyqwclHKy6KeMKpja SbWVaT7eerRaLSjzLxzsznJW3Ibumg40tO0jzzof2uG- jpJZscgsw0K0Gq8XWOOM38- CqFbuiI7b568jEsTMCGIUieFOnEQt25M8xzqsvmql3j).

Timestamp by third party at

Mon May 13 15:48:10 CEST 2019

1

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**ACCIONA CONSTRUCCION SA (ACCIONA)**, established in AVENIDA DE EUROPA 18 PARQUE EMPRESARIAL, ALCOBENDAS 28108, Spain, VAT number: ESA81638108, (‘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** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Ignacio CALVO with ECAS id ncalvoig signed in the Participant Portal on 10/05/2019 at 12:31:40 (transaction id SigId-9120-

U7FC5zxfVw1Sw3UMuHJst25izhj04B0yQGvx5m1YzWaqx 7EEzRcDWw32yFYIPQGr2B7Gu9ilRdrcuSh7k6Cv9Ee- rS0vSrmBGYCAF7GxdOQa8O- LK7NiXlYvzJzTzGwC1oOaeQ4wwZ7wp1brpDTogFUJ3gu)

. Timestamp by third party at

Fri May 10 13:31:45 CEST 2019

2

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**ARCELIK A.S. (ARCELIK)**, established in KARAAGAC, SUTLUCE BEYOGLU CAD. NO:2-6,

##### ISTANBUL 34445, Turkey, VAT number: TR0730018000, (‘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** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Ozkan Cimen with ECAS id n002itd8 signed in the Participant Portal on 10/05/2019 at 11:08:20 (transaction id SigId-7739-

NpSOl7GzPuF2xmDkSvEAzxtxelxk9jOfJgdsI9HBXyDGb1 OZ0SaVix77YlrrmySXLzrtqCcCQ1IngcfTGioEDmW- rS0vSrmBGYCAF7GxdOQa8O- RoAwHZv9u6BNPwwOPwFdLKKaM6HErXLuTzZraWIsJ0 7). Timestamp by third party at

Fri May 10 12:08:26 CEST 2019

3

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

##### **DAC Spolka Akcyjna (DAC)**, established in UL. KOŁOBRZESKA NR 14, GDANSK 80-394, Poland, VAT number: PL5842746524, (‘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** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Mateusz BONECKI with ECAS id nbonmate signed in the Participant Portal on 10/05/2019 at 08:49:25 (transaction id SigId-4744-

2zvsT9RiAtCOd1lCRUgzikiPkAMk3yZ3oP5jkDzIg02fqrZK CdbziaI4ZpdD1s52tzLzULWjs9DpWNJIKFOARYGW- rS0vSrmBGYCAF7GxdOQa8O- vZJgtXP4v0KDDahzZJfKtfkq1oHlTQGZFFcyPn5gXzM0). Timestamp by third party at

Fri May 10 09:49:31 CEST 2019

4

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**BNEARIT AB (BNEARIT)**, established in STATIONSGATAN 69, LULEA 972 34, Sweden, VAT

##### number: SE556620816001, (‘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** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Anders HERMANSON with ECAS id nherader signed in the Participant Portal on 13/05/2019 at 09:28:45 (transaction id SigId-5581- Vlpx53g24joU2bVUh8aNNGMEc9UP75GGQIhA6zHmWef daWj5iVraTL5kc1P9Er0In9h31tlemuIStmw2FJjS3i- jpJZscgsw0K0Gq8XWOOM38- mwmSF4ypnIJ0SO3ULVdfnopq0I5cxu5YfzzrpYaoPIvW). Timestamp by third party at

Mon May 13 10:28:51 CEST 2019

5

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**BOLIDEN MINERAL AB (BOLIDEN)**, established in ., SKELLEFTEHAMN 932 81, Sweden,

##### VAT number: SE663000107801, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘7’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Staffan SANDSTROM with ECAS id nsanstaf signed in the Participant Portal on 13/05/2019 at 07:48:31 (transaction id SigId-3993-

2GB2qUp9UYvhzM2Wgt9Yl40O5qSq3FUc2r9An0AltunZq O8moojlSKMQfOUu6CyczmToyVWCynFJ5kA4t2yTNh- jpJZscgsw0K0Gq8XWOOM38- RpoPesObRN49M95pzzwKk9l4OntD9Q3jQ5NF2X4Yf7O0

). Timestamp by third party at Mon May 13 08:48:45 CEST 2019

6

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**DOTGIS CORPORATION SL (dotGIS)**, established in CALLE REDECILLA DEL CAMINO 2

##### PORTAL J 4B, MADRID 28050, Spain, VAT number: ESB87543039, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘8’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

ALBERTO DIAZ with ECAS id ndaberto signed in the Participant Portal on 13/05/2019 at 21:54:09 (transaction id SigId-628- wPTB3RVv9cVTqOs2OkSPwvozWZZKNjwugDUFjvrOtwv BAhzSBbMsLpdLozRCctpERwCzM9Y6kXXOWLHE065Yg xa-rS0vSrmBGYCSC78KhOuOnG- 5GdWFVLeTB7Aihu8hczbQ4UBe6ReQ6cL5RByfvaSp5N). Timestamp by third party at

Mon May 13 22:54:17 CEST 2019

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#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**ECLIPSE FOUNDATION EUROPE GMBH (ECLIPSE)**, established in ANNASTRASSE 46,

##### ZWINGENBERG 64673, Germany, VAT number: DE293107796, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘9’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

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#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

##### **EQUA SIMULATION AB (EQUA)**, established in Rasundavaegen 100, SOLNA 16957, Sweden, VAT number: SE556612241101, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘10’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Per SAHLIN with ECAS id nsahlipe signed in the Participant Portal on 10/05/2019 at 09:54:40 (transaction id SigId-6064-

7drEMyMNhUBejyRG4Pzm5QGgdx4mQGK9aBLmdTBqrT cEACP7tkMA85sabHfZszqR5ddI44Ii1fNjCdsyTdgxfY- rS0vSrmBGYCAF7GxdOQa8O- ZZlpwTgQKr3fr00oqzzuWteVVzzdwmLxc1N8Ktzo2cZKW). Timestamp by third party at

Fri May 10 10:54:46 CEST 2019

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#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**EUROTECH SPA (EUROTECH)**, established in VIA FRATELLI SOLARI 3A, AMARO 33020,

##### Italy, VAT number: IT01791330309, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘11’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Sandro BARAZZA with ECAS id nbarazsa signed in the Participant Portal on 15/05/2019 at 10:43:34 (transaction id SigId-20666-

oQ0hOCpSYVXUnAQLdVMuEZtxtr0M6hj09V1BrrEuQYYr OYvB5hdlMmQnO0msaLYi16bOMbcDWvk8yR6ZVOQfnm

-rS0vSrmBGYCSC78KhOuOnG-

PpKhLzwbLzalLOLbaFk1xVNBU4Ay4j9ZxaPaGYZOHGb G). Timestamp by third party at

Wed May 15 11:43:49 CEST 2019

10

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**FAGOR ARRASATE S COOP (FARR)**, established in BARRO SAN ANDRES 20, ARRASATE

##### MONDRAGON 20500, Spain, VAT number: ESF20020574, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘12’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

David Pascual with ECAS id n0027okg signed in the Participant Portal on 13/05/2019 at 13:53:58 (transaction id SigId-11608-

62stdLmzIKLAxTX4It18eLqTsErnunqIB6lMe6NEAavDVqnl OGVgwLyPzt5JsXmRpnVPllzZjyVA79zwOVxgLFG- jpJZscgsw0K0Gq8XWOOM38- 3fHgnWWPXRSszuZ2E6N1RhMla6YDg3u3fs5VdyfD020). Timestamp by third party at

Mon May 13 14:54:13 CEST 2019

11

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**FAGOR AUTOMATION S COOP LTDA (FAUT)**, established in BARRIO SAN ANDRES 19,

##### MONDRAGON 20500, Spain, VAT number: ESF20071114, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘13’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

AIZPEA SAGASTIZABAL with ECAS id nsagasai signed in the Participant Portal on 10/05/2019 at 08:46:21 (transaction id SigId-4672- xpAWvzjbpq2Fh2TVUA0zPjKzzhXw4HyiSgubzqKrzqTJ0D DAgfzq1xI3ewChHhdyv63nUeLStACerAWKzJKrbhXL- rS0vSrmBGYCAF7GxdOQa8O- dyFZoLmbm3QDDTSEztqNzszPzJp1lkQAQWCi4sKnxCT L). Timestamp by third party at

Fri May 10 09:46:26 CEST 2019

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#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**POLITECHNIKA GDANSKA (GUT)**, established in UL. GABRIELA NARUTOWICZA 11/12,

##### GDANSK 80-233, Poland, VAT number: PL5840203593, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘14’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Janusz SMULKO with ECAS id nsmujanu signed in the Participant Portal on 15/05/2019 at 12:01:59 (transaction id SigId-22498-

PFzNudn14udE2nMLFt6xEOADzce40X7r253zIhqS9hkzR POf3F4WEITBsTkPlJDGKtGyFV7DqAYH9RRqEx67BJ8-

rS0vSrmBGYCSC78KhOuOnG- Tlw0wvFhycRhBeuBbh5vpjo3zHA2bMZLyfBzzLlEXZre). Timestamp by third party at

Wed May 15 13:02:06 CEST 2019

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#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**IKERLAN S COOP (IK4-IKERLAN)**, established in P JOSE MARIA ARIZMENDIARRIETA 2,

##### MONDRAGON 20500, Spain, VAT number: ESF20079828, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘15’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Marcelino CABALLERO with ECAS id ncabmrce signed in the Participant Portal on 10/05/2019 at 09:55:27 (transaction id SigId-6083- wWmsJmkahIRPOr7rGrzICCZ2RmZ7y7rjzXrKMYewm03K xfGXwdo9ExHqeKRJBDJHbUPV1LqCi16rry3IewJga2- rS0vSrmBGYCAF7GxdOQa8O- QpkrXT3rdMOFbZbqiynVPsVTsfENMN1CXZ4vF8hf5m8). Timestamp by third party at

Fri May 10 10:55:34 CEST 2019

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#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**INFINEON TECHNOLOGIES AUSTRIA AG (IFAT)**, established in SIEMENSSTRASSE 2,

##### VILLACH 9500, Austria, VAT number: ATU46981707, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘16’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

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#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**INFINEON TECHNOLOGIES DRESDEN GMBH& CO KG (IFD)**, established in KONIGSBRUCKER STRASSE 180, DRESDEN 01099, Germany, VAT number: DE163852010,

##### (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘17’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

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#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**INFINEON TECHNOLOGIES AG (IFAG)**, established in AM CAMPEON 1-15, NEUBIBERG

##### 85579, Germany, VAT number: DE812655055, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘18’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Joerg Spiegel with ECAS id n002jccb signed in the Participant Portal on 12/05/2019 at 14:55:33 (transaction id SigId-2677-

CXNuVKnO7UkJh3mJkLCRHlpPrYhk4KV0SuQlRzYWWR eh0AxgSLrUfsMlRKvOpQnZyyZzMuEt1zfHiq0gscgvixW- jpJZscgsw0K0Gq8XWOOM38- FE51TAE6nw79FgHzugQQ9aeIoq7nzy3xPuGxU2wRU68 0). Timestamp by third party at

Sun May 12 15:55:39 CEST 2019

17

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**USTAV TEORIE INFORMACE A AUTOMATIZACE AV CR VVI (UTIA)**, established in POD VODARENSKOU VEZI 4 LIBEN, PRAHA 8 182 00, Czech Republic, VAT number: CZ67985556,

##### (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘19’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Jirina VEJNAROVA with ECAS id nvejnaji signed in the Participant Portal on 20/05/2019 at 09:24:34 (transaction id SigId-10283-

Pd8Mx7tUzgzjrb0URssYuAi8tFRfkgzTjIrpj8pOtzf4czbtw7b R69V6mDeLqLC4YNnJstxT2lXgHkeuc5qSs8M- rS0vSrmBGYCnvnKXAYJ9D8- XKUyxosxtIBW8hd8ebZPAzXcEWwaqdavTrzY13BcsuuW)

. Timestamp by third party at

Mon May 20 10:24:47 CEST 2019

18

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**CONSORZIO NAZIONALE INTERUNIVERSITARIO PER LA NANOELETTRONICA**

##### **(IUNET)**, established in VIA TOFFANO 2, BOLOGNA 40125, Italy, VAT number: IT02598581201, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘20’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Luca Selmi with ECAS id n0023533 signed in the Participant Portal on 10/05/2019 at 20:05:45 (transaction id SigId-1309-

yKsUJ4kcwzqGfhckdBLc4r3mzW17y7MgWBrvJva9E1CIp J6bCG6mUL31FSr5EwO7WwadcH7F1V6hBW5rEu7oiR- jpJZscgsw0K0Gq8XWOOM38- ijVJOzeQ3eNnSMxzO2bpaZzHhRqujiJ4AOfeE7SLQ5Pq). Timestamp by third party at

Fri May 10 21:05:52 CEST 2019

19

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**JOTNE EPM TECHNOLOGY AS (Jotne)**, established in GRENSEVEIEN 107, OSLO 0663,

##### Norway, VAT number: NO948979357MVA, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘21’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

KJELL BENGTSSON with ECAS id nbengtkj signed in the Participant Portal on 10/05/2019 at 08:39:28 (transaction id SigId-4544-

B7PzPviKmCQP7FZVcJ1cfbMEfzRawhR6jzMsgza6zW1e HzSgcCerb3KMPHEoPakAuyQBfgvqcwnF3ngRGOzYp4i m-rS0vSrmBGYCAF7GxdOQa8O- zcfKD28ghalyIkP49DAtS4IHYKur77e55lzTn26FtD6G).

Timestamp by third party at

Fri May 10 09:39:34 CEST 2019

20

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**KAI KOMPETENZZENTRUM AUTOMOBIL - UND INDUSTRIEELEKTRONIK GMBH (KAI)**, established in EUROPASTRASSE 8, VILLACH ST MAGDALEN 9524, Austria, VAT

##### number: ATU62221937, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘22’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Josef FUGGER with ECAS id nfuggjos signed in the Participant Portal on 14/05/2019 at 10:00:35 (transaction id SigId-4273-

r88aptccSk2tx0uKTBM4apjZ4CzJeC348NHY2IWZHO0x3l wZmZ6djYRjaKOwBQEA6Qsm88L7A6P0pzfRFuEiDA- rS0vSrmBGYCSC78KhOuOnG- zzOllSoIaIcsR7yxuHGdT5woLLHApx16DCugdBMnqVIW). Timestamp by third party at

Tue May 14 11:00:49 CEST 2019

21

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

##### **LINDBACKS BYGG AB (LIND)**, established in N/A, PITEA 941 28, Sweden, VAT number: SE556118083601, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘23’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Stefan LINDBÄCK with ECAS id nlindbst signed in the Participant Portal on 20/05/2019 at 09:08:58 (transaction id SigId-9971-

ZWOGgU1J8MrYYNxlzu0sf5q0VPRYYT8sAsNNPbszwuQ 4PHDdHzfJkC0WVZADxhwbyBn7d5KgnOvumpznRjf7PsS

-rS0vSrmBGYCnvnKXAYJ9D8- JMlNvPzXQO8XhDzeC2cZAGp50j74ENvY71ueXJPSS0B

m). Timestamp by third party at Mon May 20 10:09:12 CEST 2019

22

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**LUNDQVIST TRAVARU AB (LQT)**, established in MEJSELVAGEN 28, OJEBYN 943 36,

##### Sweden, VAT number: SE556066049901, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘24’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

23

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**MONDRAGON GOI ESKOLA POLITEKNIKOA JOSE MARIA ARIZMENDIARRIETA**

##### **S COOP (MGEP)**, established in LORAMENDI 4, ARRASATE 20500, Spain, VAT number: ESF20045241, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘25’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Carlos GARCÍA with ECAS id ngarcabm signed in the Participant Portal on 13/05/2019 at 08:08:34 (transaction id SigId-4196-

OjU2rXbd61J0mfEEaMzyMzW7B88xuNrGxpprRUaoMl9G WfRSpRzWRNxCLoots3onQqGjkXOAszzZXNlzQQ5lTu4 m-jpJZscgsw0K0Gq8XWOOM38- IJYl0bRRxPPXGeKaK1AksZsSnqxkJD3t7oF8rSut0yO).

Timestamp by third party at

Mon May 13 09:08:39 CEST 2019

24

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**MONDRAGON SISTEMAS DE INFORMACION SOCIEDAD COOPERATIVA (MSI)**,

##### established in CALLE AMA KANDIDA 21, ANDOAIN 20140, Spain, VAT number: ESF20585576, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘26’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Iban LUIS with ECAS id nluisiba signed in the Participant Portal on 11/05/2019 at 12:14:09 (transaction id SigId- 1828-

KxZmUs7b1PZJkF0eqsAMe5KHdQ3TkUbsZ1lhvH6aQ9Sf Z1m7zPWrdPzSC38Oa9dElwx3qwifPGsmx1g3Zbd9C0- jpJZscgsw0K0Gq8XWOOM38- t1kXmrKnUAnqSSvZ4154J77wDCpqb2AYZgDhONollX0). Timestamp by third party at

Sat May 11 13:14:16 CEST 2019

25

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**HOGSKOLEN I OSTFOLD (HIOF)**, established in REMMEN, HALDEN 1757, Norway, VAT

##### number: NO971567376MVA, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘27’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Trine Eker Christoffersen with ECAS id n00274kf signed in the Participant Portal on 10/05/2019 at 13:18:02 (transaction id SigId-9949- fPk9Sv4DLEa3HHeSxCyJWDX7zgfdGOzoFdzaT6AwT9w R4OpWnZ4cznwu8yjqwnzcISrC1axJGBnoBc5uHM5vQg9- rS0vSrmBGYCAF7GxdOQa8O- HC3d0fJjzNzKR9D0K3mT37K6fZzXAWMIsuaRpTvjNt5y). Timestamp by third party at

Fri May 10 14:18:11 CEST 2019

26

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**PHILIPS MEDICAL SYSTEMS NEDERLAND BV (PHILIPS)**, established in VEENPLUIS 4-6,

##### BEST 5684 PC, Netherlands, VAT number: NL009076840B01, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘28’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

27

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**PODCOMP AB (PODCOMP)**, established in SKYLAVAGEN 1, OJEBYN 94333, Sweden, VAT

##### number: SE556401485901, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘29’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

28

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**POLITECNICO DI TORINO (POLITO)**, established in CORSO DUCA DEGLI ABRUZZI 24,

##### TORINO 10129, Italy, VAT number: IT00518460019, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘30’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

29

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**SANTER REPLY SPA (REPLY)**, established in VIA ROBERT KOCH 1/4, MILANO 20152,

##### Italy, VAT number: IT13262400156, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘31’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

30

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**KNOWLEDGE CENTRIC SOLUTIONS SL (REUSE)**, established in CALLE MARGARITA SALAS 16 PARQUE TECNOLOGICO LEGATE, LEGANES MADRID 28919, Spain, VAT number:

##### ESB87512893, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘32’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

José-Miguel FUENTES with ECAS id nfuejsem signed in the Participant Portal on 10/05/2019 at 10:26:46 (transaction id SigId-6765- T1ZwdmWxnPzpJY1Ka0mK5QZIrlcBwEA7EGfylMDSnEPf uA9zSVIOLrDafXEZ4uzYpDkFf8hc2zGDzXjC5zMfznCm- rS0vSrmBGYCAF7GxdOQa8O- Yr4bTXBiDL8suDkJhc9ZF5ysSFMKqxkrfK5YWoKOzLZ). Timestamp by third party at

Fri May 10 11:26:52 CEST 2019

31

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**STMICROELECTRONICS SRL (ST-I)**, established in VIA C.OLIVETTI 2, AGRATE BRIANZA

##### 20864, Italy, VAT number: IT00951900968, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘33’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Orio BELLEZZA with ECAS id nbelleor signed in the Participant Portal on 10/05/2019 at 10:27:23 (transaction id SigId-6774-

i45dua0vWzVMDmqJ2XYclMs8ZVLYDwzJJlTRveWzzp15 Ap7xLwtttczKrwIZNLsmgqukpyNNCFxZ2fzrC4fGNou0- rS0vSrmBGYCAF7GxdOQa8O- g5rXbJ7n7pCeDyZRiWPmzPyTDwmMcvFJqSbsRZYUzlc W). Timestamp by third party at

Fri May 10 11:27:30 CEST 2019

32

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**NORGES TEKNISK-NATURVITENSKAPELIGE UNIVERSITET NTNU (NTNU)**,

##### established in HOGSKOLERINGEN 1, TRONDHEIM 7491, Norway, VAT number: NO974767880MVA, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘34’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

33

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**TELLU IOT AS (TELLU IOT)**, established in LENSMANNSLIA 4, ASKER 1386, Norway,

##### VAT number: NO917519919MVA, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘35’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Arnor Solberg with ECAS id n001zuj4 signed in the Participant Portal on 10/05/2019 at 15:46:29 (transaction id SigId-13461-

zyzvNLZRb8RizmYoI0lpazWZgpfJEYgfPrySEks4JZkJlW9 LYr1jn1YzH9tbML0KcHbvFvzLKcpdtCH6nKguGHXG- rS0vSrmBGYCAF7GxdOQa8O- zrFwadp4mbMng6zxiKAKB0KvO9KjPoHNaiko4MtOO6bm)

. Timestamp by third party at

Fri May 10 16:46:42 CEST 2019

34

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**TECHNISCHE UNIVERSITAET DRESDEN (TUD)**, established in HELMHOLTZSTRASSE 10,

##### DRESDEN 01069, Germany, VAT number: DE188369991, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘36’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

35

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**TECHNISCHE UNIVERSITAET KAISERSLAUTERN (TUK)**, established in GOTTLIEB

##### DAIMLER STRASSE, KAISERSLAUTERN 67663, Germany, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘37’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Kurt SENDLDORFER with ECAS id nsendlku signed in the Participant Portal on 16/05/2019 at 16:58:33 (transaction id SigId-44340-

O3VzYfi3yyzND8Y3fYdszw3ktB3HAQ7nukN9A1ZQblknFK fiFJer2puzkdVDgGvYWWBzNdUSR0h7sV4xjvlwMgU- rS0vSrmBGYCSC78KhOuOnG- CndHiwOoLzThlEzYPcFzrAbve5UOC1amOZ3zOqDavszY m). Timestamp by third party at

Thu May 16 17:58:39 CEST 2019

36

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**UNIVERSIDAD CARLOS III DE MADRID (UC3M)**, established in CALLE MADRID 126,

##### GETAFE (MADRID) 28903, Spain, VAT number: ESQ2818029G, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘38’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Juan José Vaquero López with ECAS id n002o77v signed in the Participant Portal on 10/05/2019 at 11:12:46 (transaction id SigId-7821- 5NWOgfEgni31BeLF1c3WkvJeU2BhesucCrv4POLGciLiXr DmBGVVU0Fu2LzxcrBbPjkrdKPVbGG5exkE6AMzaG- rS0vSrmBGYCAF7GxdOQa8O- AgZLHBsBwYih3wc06xfEpGwujVvMeMwYlTqzVxPT6qn). Timestamp by third party at

Fri May 10 12:12:51 CEST 2019

37

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**ULMA EMBEDDED SOLUTIONS S COOP (ULMA)**, established in GARAGALTZA AUZOA

##### 51, ONATI 20560, Spain, VAT number: ESF75010462, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘39’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

38

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**Kompetenzzentrum - Das Virtuelle Fahrzeug, Forschungsgesellschaft mbH (VIF)**, established in Inffeldgasse 21 A, Graz 8010, Austria, VAT number: ATU54713500, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

#### hereby agrees

**to become beneficiary** No (‘40’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

39

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**SIRRIS HET COLLECTIEF CENTRUM VAN DE TECHNOLOGISCHE INDUSTRIE (SIRRIS)**, established in BOULEVARD AUGUSTE REYERS 80 DIAMANT BUILDING,

##### BRUXELLES 1030, Belgium, VAT number: BE0406606380, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘41’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Herman DERACHE with ECAS id nderache signed in the Participant Portal on 12/05/2019 at 21:19:55 (transaction id SigId-2922-

AgsQSu0lNHsDhMEgxec7EDtqzZazGMwdM5Bhbuy4xq6L PrzIgbA4wytdNpnKJO158zWXOznTIvbcE8yx53hqKxk- jpJZscgsw0K0Gq8XWOOM38- mN7RdPL9zrMK6oNaJIgUpwzGeAQYzj6o3Ro528yzjqZX)

. Timestamp by third party at

Sun May 12 22:20:00 CEST 2019

40

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

##### **3E NV (3E)**, established in KALKKAAI 6, BRUSSEL 1000, Belgium, VAT number: BE0465755594, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘42’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Geert PALMERS with ECAS id npalmege signed in the Participant Portal on 14/05/2019 at 08:17:03 (transaction id SigId-2063-

eZBuU8tH0IzwrACzcDLtuDgdIKlwszGE4ajkEoTFecV17u W7mLG216bvKg5YP1NK8bt9cbIJMk035hsWWzwztIT- rS0vSrmBGYCSC78KhOuOnG- CYm6F7MPzsxJItvLhMITLiJDDNlM0bT6tRMnhy64CQb). Timestamp by third party at

Tue May 14 09:17:18 CEST 2019

41

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

##### **VOLVO LASTVAGNAR AB (VTC)**, established in c/o Volvo Business Services AB, GOTEBORG 405 08, Sweden, VAT number: SE556013970001, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘43’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Staffan VIDEN with ECAS id nvidenst signed in the Participant Portal on 10/05/2019 at 09:51:11 (transaction id SigId-5995-

Myd58e8izH0L59SVF2cLRCpdZ5ukzkTEsZy0L7JzrnEHW mi0CuKVMw6p5jmuscQv8Cc2tpeG3icwDJivWrHzLYm- rS0vSrmBGYCAF7GxdOQa8O- IveOrqziW54EzML7VHTxDya45gRsV5FKZMk1N2xVlSbW

). Timestamp by third party at Fri May 10 10:51:17 CEST 2019

42

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**ELEKTRONIKAS UN DATORZINATNU INSTITUTS (EDI)**, established in DZERBENES

##### IELA 14, RIGA 1006, Latvia, VAT number: LV90002135242, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘44’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Modris GREITANS with ECAS id ngreitmo signed in the Participant Portal on 10/05/2019 at 15:49:57 (transaction id SigId-13521-

LKoPgQC0aw7MlVXjx9vRtNWvJFHXTAVgzxti06DmVqv9 xKThPocl1rjj3TImhuKptuEYVaScv6PtCMmIsW5tXe- rS0vSrmBGYCAF7GxdOQa8O- t84PHB3ng4WMRbEYjQKJl6MhQdkTEA1YWwxOReuGE m8). Timestamp by third party at

Fri May 10 16:50:11 CEST 2019

43

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**FORSCHUNG BURGENLAND GMBH (FB)**, established in CAMPUS 1, EISENSTADT 7000,

##### Austria, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘45’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Silvia Knopf with ECAS id n001zlso signed in the Participant Portal on 10/05/2019 at 09:21:09 (transaction id SigId-5362-

gLCt3FhzXURCojxEdZjSGXWQtOuzfq5O3lqiKdprl5B5bSp 4nI4TS1K55B2KDCqBqeZJc6xSXwJ2zIQqNsfFLvW-

rS0vSrmBGYCAF7GxdOQa8O- jzrhF6eRr1GXD5lBttwLKLQ8U0E2MXpDIHudZOPpdJo). Timestamp by third party at

Fri May 10 10:21:14 CEST 2019

44

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**VYSOKE UCENI TECHNICKE V BRNE (BUT)**, established in ANTONINSKA 548/1, BRNO

##### STRED 601 90, Czech Republic, VAT number: CZ00216305, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘46’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

45

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**CESKE VYSOKE UCENI TECHNICKE V PRAZE (CVUT)**, established in JUGOSLAVSKYCH

##### PARTYZANU 1580/3, PRAHA 160 00, Czech Republic, VAT number: CZ68407700, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘47’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

46

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**ROPARDO SRL (ROPARDO)**, established in STR RECONSTRUCTIEI 2A, SIBIU 550129,

##### Romania, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘48’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

47

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**SAP NORWAY AS (SAP)**, established in LYSAKER TORG 5, LYSAKER 1366, Norway, VAT

##### number: NO980500101MVA, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘49’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

48

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**INSTITUTE FUR ENGINEERING DESING OF MECHATRONIC SYSTEMS UND MPLM**

##### **EV (EDMS)**, established in LIPOWSKYSTRASSE 23, MUNCHEN 81373, Germany, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘50’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Vahid SALEHI with ECAS id nsalehiv signed in the Participant Portal on 10/05/2019 at 09:23:10 (transaction id SigId-5413-

sGzZXacZNUnnFlfXy3U4URkhvqYSzUEtDdsP4HuKzboRj R1OGU74KfydUx4jZzxg5VOTOfgZbLwdEvh6zQbCiXK- rS0vSrmBGYCAF7GxdOQa8O- xUjjhpmp94xljvOrEWoynDunQwnjyluc8xlEdnbVn8O).

Timestamp by third party at

Fri May 10 10:23:16 CEST 2019

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#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**CISC SEMICONDUCTOR GMBH (CISC)**, established in LAKESIDE B07, KLAGENFURT

##### 9020, Austria, VAT number: ATU48357807, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘51’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Markus PISTAUER with ECAS id npistams signed in the Participant Portal on 16/05/2019 at 16:46:51 (transaction id SigId-44214-

HZzPZKIzgEBEwRKlXQZCyBa5euvSHcI1iPupdiqtIgtej5G DKzkcUOzKH2KBFr4qoXOAEeFJUVF4NPpgbIjrSE8- rS0vSrmBGYCSC78KhOuOnG- r9zyZb1infPzMeyN19fbVAanj4loLxvPWMWIwV7L3yeW). Timestamp by third party at

Thu May 16 17:49:57 CEST 2019

50

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**INSTITUT FUER AUTOMATION UND KOMMUNIKATION E.V. MAGDEBURG (ifak)**, established in WERNER HEISENBERG STRASSE 1, MAGDEBURG 39106, Germany, VAT

##### number: DE154349216, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘52’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

51

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES**

##### **(CEA)**, 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 (‘53’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

52

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**MAGILLEM DESIGN SERVICES SAS (Magillem)**, established in RUE DU FAUBOURG SAINT

##### MARTIN, 251, PARIS 75010, France, VAT number: FR56492681671, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘54’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

53

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**TECHNEXT (TECHNEXT)**, established in 8 AVENUE SAINT JEAN, CANNES 06400, France,

##### VAT number: FR38437779762, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘55’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

54

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**STMICROELECTRONICS GRENOBLE 2 SAS (STM)**, established in RUE JULES HOROWITZ

##### 12, GRENOBLE 38000, France, VAT number: FR49504941337, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘56’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

55

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**AITIA INTERNATIONAL INFORMATIKAI ZARTKORUEN MUKODO RT (AITIA)**,

##### established in CZETZ JANOS UTCA 48-50, BUDAPEST 1039, Hungary, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘57’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Eszter KORMOS with ECAS id nkormesz signed in the Participant Portal on 10/05/2019 at 08:35:28 (transaction id SigId-4471-

JuTfWYF6WKtjTDWuNJPY6RqVxvCm9iyL2G0lfrE39TQS 89tpAzdkCFeib80HRSznNMhTuFCoOzGrttlP6zJPCC4- rS0vSrmBGYCAF7GxdOQa8O- 81RGekcgKyNDw3fc7VXn4CYOpAPXBkhJ1YutORBlc28). Timestamp by third party at

Fri May 10 09:35:33 CEST 2019

56

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**EVOPRO INNOVATION KFT (EVOPRO)**, established in HAUSZMANN ALAJOS UTCA 2,

##### BUDAPEST 1116, Hungary, VAT number: HU24120614, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘58’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

57

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**BUDAPESTI MUSZAKI ES GAZDASAGTUDOMANYI EGYETEM (BME)**, established in MUEGYETEM RAKPART 3, BUDAPEST 1111, Hungary, VAT number: HU15308799, (‘the

##### beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘59’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

58

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**INCQUERY LABS KUTATAS-FEJLESZTESI KFT (IQL)**, established in RAKOCZI UT 36,

##### BUDAPEST 1072, Hungary, VAT number: HU24216182, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘60’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Akos HORVATH with ECAS id nhvatako signed in the Participant Portal on 13/05/2019 at 13:48:20 (transaction id SigId-11429-

x7XzuzzRzKJJnurzUlP8izv841TPMcLSiEoNbt2EcsrTfmgR vbnBTIjk6aRcsx0pzbcj2tCTidzm2Q6I4h2wI8Km- jpJZscgsw0K0Gq8XWOOM38- 3yAozSio5vVURNhtxTRjNHzoCo2rlMwHRE2TPBH7nTG0

). Timestamp by third party at Mon May 13 14:48:26 CEST 2019

59

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**UNIVERSIDADE NOVA DE LISBOA (UNL)**, established in CAMPUS DE CAMPOLIDE,

##### LISBOA 1099 085, Portugal, VAT number: PT501559094, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘61’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

João Sáàgua with ECAS id n0029rr4 signed in the Participant Portal on 10/05/2019 at 14:42:14 (transaction id SigId-12049-

n8puXBuzqJZC3v37vU8GzroskHFVyqe6kl0pBLdTPzTjYx 94dO7sDeu1iBfC6UKGAa6HKfMFWD8HtSIdR40zfee- rS0vSrmBGYCAF7GxdOQa8O- WYsD7Y0TDsJJ7KH2hC98W45LADv5zHYDiU1Q9bjHde7

). Timestamp by third party at Fri May 10 15:42:25 CEST 2019

60

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**UNIVERSITAT ZU LUBECK (UZL)**, established in RATZEBURGER ALLEE 160, LUBECK

##### 23538, Germany, VAT number: DE202095138, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘62’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

61

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**BEIA CONSULT INTERNATIONAL SRL (BEIA)**, established in STREET POIANA NARCISELOR 12 1ST FLOOR APARTMENT 3 SECTOR 1, BUCURESTI 010158, Romania, VAT

##### number: RO1572582, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘63’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

George SUCIU with ECAS id nsuciuge signed in the Participant Portal on 21/05/2019 at 07:13:15 (transaction id SigId-23558-

UmjNdBboKWCSuCVTYUcZwGhDO59kTrXquY8mOLRE Ddd8tUOzLeGiAzmWsA83vPYkAFUmHmapkKfUlUKBCE sltx-rS0vSrmBGYCnvnKXAYJ9D8- rqRGm48yuI0cRCvPJBX9FYGay1yQFdS1yIuJQ719b7a). Timestamp by third party at

Tue May 21 08:13:30 CEST 2019

62

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**TECHNISCHE UNIVERSITEIT EINDHOVEN (TU/e)**, established in GROENE LOPER

##### 3, EINDHOVEN 5612 AE, Netherlands, VAT number: NL001956218B01, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘64’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Jan MENGELERS with ECAS id nmengeja signed in the Participant Portal on 11/05/2019 at 20:42:20 (transaction id SigId-2153-

ORG3ATGWaByurKjaLLkzsQzcmqRIfrVOXcN80Q2rTDDI zqhb9Vr3UwSnsmtno7dKIkxSPwtpuTLQHQ8YIOJPJRm- jpJZscgsw0K0Gq8XWOOM38- EM7JmddgERE3R63ihs2XSuRBhwRpogojzvkM8ckmFzn W). Timestamp by third party at

Sat May 11 21:42:25 CEST 2019

63

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**AIT AUSTRIAN INSTITUTE OF TECHNOLOGY GMBH (AIT)**, established in

##### GIEFINGGASSE 4, WIEN 1210, Austria, VAT number: ATU14703506, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘65’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

64

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**SYSTEMA SYSTEMENTWICKLUNG DIPL INF.MANFRED AUSTEN GMBH (SYSTEMA)**,

##### established in MANFRED VON ARDENNE RING 6, DRESDEN 01099, Germany, VAT number: DE159607786, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘66’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

65

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

##### **SEMANTIS INFORMATION BUILDERS GMBH (Semantis)**, established in OBERE ZEIL 2, OBERURSEL 61440, Germany, VAT number: DE249953787, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘67’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Norbert Waleschkowski with ECAS id n00268op signed in the Participant Portal on 11/05/2019 at 21:57:09 (transaction id SigId-2176- nzs7e5IOmrVZPJJufABGB19UzzrWNc6ok5mOBIAvBk8vz GOV9PzvRqczpk6YlfHemcGtj7MYcMyy691e1XQDMF2W- jpJZscgsw0K0Gq8XWOOM38- X2gCvW2izyab7hxBQZVFkIzRzR7qD8GUdfgyvT8roW3O)

. Timestamp by third party at

Sat May 11 22:57:14 CEST 2019

66

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**ROBERT BOSCH GMBH (Bosch)**, established in ROBERT-BOSCH-PLATZ 1, GERLINGEN-

##### SCHILLERHOEHE 70839, Germany, VAT number: DE811128135, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘68’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Birgit CLAAS with ECAS id nclaasbi signed in the Participant Portal on 10/05/2019 at 11:25:21 (transaction id SigId-8077-

IBJih7WsHzYkDzn4p3bZ5Fav8bB9H0kzND3FaUfzVRdnm XG9ylhzvfT8SLwNJzzziaoH9CgURPxvGxPY6iC6RMVO- rS0vSrmBGYCAF7GxdOQa8O- 6sczMzIW2oCeIDzjGJJdHK1bQt6gFCWpnaUkLL2O7szz m). Timestamp by third party at

Fri May 10 12:25:28 CEST 2019

67

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**ASML NETHERLANDS B.V. (ASML)**, established in DE RUN 6501, VELDHOVEN 5504DR,

##### Netherlands, VAT number: ., (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘69’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Jan SMITS with ECAS id nsmitsah signed in the Participant Portal on 10/05/2019 at 12:08:48 (transaction id SigId-8722-

abR9WIEdzbGTt0q3sCr4yt4WZiN36YaxitzIoMzk61RGjFzJ xeL6Ezq4NdzKdEn2t3Gc2PVPoCdQLHFviUwfBF70- rS0vSrmBGYCAF7GxdOQa8O- XxcocTn3Js4WgeMJilFbKDNBxfmpRIDNGIbi7DC4HJu). Timestamp by third party at

Fri May 10 13:08:53 CEST 2019

68

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**ICT AUTOMATISERING NEDERLAND BV (ICT)**, established in KOPENHAGEN 9,

##### BARENDRECHT 2993 LL, Netherlands, VAT number: NL823568817B02, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘70’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

69

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

##### **EQUA SOLUTIONS AG (EQCH)**, established in UNTERMULI 3, ZUG 6300, Switzerland, VAT number: CHE115326758MWST, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘71’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Sven Moosberger with ECAS id n0026fut signed in the Participant Portal on 10/05/2019 at 17:10:18 (transaction id SigId-583- 1JmdAHNj3qN9yZgdxl5jqzXkgBupRuEwKs704xjuzS0FF0l vzw5hOsJN7xbzyoPzdmFfuKrCXd0ASqwcZGmepMe- jpJZscgsw0K0Gq8XWOOM38- jDdlXI2BwW3Og2F81YNtwA8QNAvEYkuu85Ozjsq26BX). Timestamp by third party at

Fri May 10 18:10:26 CEST 2019

70

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**Hochschule fuer Technik und Wirtschaft Dresden (HTW)**, established in Friedrich-List-Platz 1, Dresden D-01069, Germany, VAT number: DE188729062, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

#### hereby agrees

**to become beneficiary** No (‘72’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Monika NIEHUES with ECAS id nniehumo signed in the Participant Portal on 13/05/2019 at 13:49:09 (transaction id SigId-11457-

KvqhEeHVF1HKRFpzgznjabwizanjE49WzOfMzNIzZl0RlD mEbceg5KhztCGEDmZa4NejfN1d3bMqjimvzMBHJpat- jpJZscgsw0K0Gq8XWOOM38- Tzp2jhRoP7oZ8vM0pn1T9sSxqJFoDSy8slAQiMleVmF). Timestamp by third party at

Mon May 13 14:49:15 CEST 2019

71

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**BOSCH SOFTWARE INNOVATIONS GMBH (BOSCH SI)**, established in ULLSTEINSTRASSE 128, BERLIN 12109, Germany, VAT number: DE203273734, (‘the

##### beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘73’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Birgit CLAAS with ECAS id nclaasbi signed in the Participant Portal on 10/05/2019 at 11:23:51 (transaction id SigId-8054-

nyamiRNaztHCmfl9MqUhzngTf5eiT7gLPIT7wV7QDuMiTB m0nQ7qtszYqFM3BIRxPdS0sWhc8YKjclpV5e00tKG- rS0vSrmBGYCAF7GxdOQa8O- huafRYXNaZShJCuOzQQ1N2SvVjGQaxvLxf7QIelrRIP). Timestamp by third party at

Fri May 10 12:23:57 CEST 2019

72

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**EXPLEO GERMANY GMBH (EXPLEO)**, established in ERWIN VON KREIBIG STRASSE 3,

##### MUNCHEN 80807, Germany, VAT number: DE129470722, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘74’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

73

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**MONDRAGON CORPORACION COOPERATIVA SCOOP (MON)**, established in PASEO JOSE M ARIZMENDIARRIETA 5, MONDRAGON GUIPUZCOA 20500, Spain, VAT number:

##### ESF20350823, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘75’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Eduardo BELTRÁN DE NANCLARES with ECAS id nbeltred signed in the Participant Portal on 10/05/2019 at 13:44:41 (transaction id SigId-10600- zOYL7hilk6a3qULNrSu3dXJZPciUnLzzsq0YeYpnexnzosa J9Pt2Ini85TktdtEFqHeTvQljgyFvcy0mW6j51rC- rS0vSrmBGYCAF7GxdOQa8O- klPArIVNI58Bns7yR1wpubQfT7DCOGk6SgoRYogqiaW). Timestamp by third party at

Fri May 10 14:44:47 CEST 2019

74

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**WAPICE OY (WAPICE)**, established in YLIOPISTONRANTA 5 3RD FLOOR, VAASA 65200,

##### Finland, VAT number: FI15720406, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘76’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

75

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

##### **ABB OY (ABB)**, established in HIOMOTIE 13, HELSINKI 00381, Finland, VAT number: FI07634030, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘77’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Jan Westerlund with ECAS id n0025zyf signed in the Participant Portal on 10/05/2019 at 12:00:35 (transaction id SigId-8613-

x3urpLvDsljw8tXq47A04zkT6tNes5nbnemCtLkhokHXTBB zRxNRGwrTzI8zSxUUzRsJf4YHKsqlMbwMSCZfB87- rS0vSrmBGYCAF7GxdOQa8O- Tpov2qaYdXwkQ1eY1tHpkzzIQYqmnfb1gl9obGilaa7W). Timestamp by third party at

Fri May 10 13:00:41 CEST 2019

76

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

##### **Teknologian tutkimuskeskus VTT Oy (VTT)**, established in VUORIMIEHENTIE 3, Espoo 02150, Finland, VAT number: FI26473754, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘78’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Janne Järvinen with ECAS id n002bn1h signed in the Participant Portal on 15/05/2019 at 13:44:18 (transaction id SigId-24649-

Ig3t2d3rzeCIs9MpSzJyLjTNmbKLV4ZDPGfJtxY1WmzcB5 v0qhbkisvlfAKAGYnhk3JVNscKaznCeCwt9qGtVhK- rS0vSrmBGYCSC78KhOuOnG- hljJ0xzO4txO6aAmZW7VTVgzcibqMuMo0S61LkzbmfFW). Timestamp by third party at

Wed May 15 14:44:25 CEST 2019

77

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

**TECHNOLUTION BV (TECHNOLUTION BV)**, established in BURGERMEESTER JAMESSINGEL 1, GOUDA 2803 WV, Netherlands, VAT number: NL007781465B01, (‘the

##### beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘79’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

78

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

##### **CAMEA, spol. s r.o. (CAMEA)**, established in KORENSKEHO 25, BRNO 62100, Czech Republic, VAT number: CZ60746220, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘80’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Peter HONEC with ECAS id nhonecpe signed in the Participant Portal on 11/05/2019 at 11:06:58 (transaction id SigId-1798-

O2ckcTClrV4vRqr8cTnLtsLM7tFDicd3KWWA6PizlFTbWV MkZqV6QbwJolQIznnIB1cjNkU7KN615fvE95Y2mzm- jpJZscgsw0K0Gq8XWOOM38- OhIeA2lKjngrXVDA8dBWRsytlpgRkEmUXwPPDcoa8We). Timestamp by third party at

Sat May 11 12:07:04 CEST 2019

79

#### ANNEX 3

**ACCESSION FORM FOR BENEFICIARIES**

##### **CSC-TIETEEN TIETOTEKNIIKAN KESKUS OY (CSC)**, established in Keilaranta 14, ESPOO 02101, Finland, VAT number: FI09206320, (‘the beneficiary’), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No (‘81’)

**in Grant Agreement No** 826452 (‘the Agreement’)

##### **between** LULEA TEKNISKA UNIVERSITET **and** the Electronic Component Systems for European Leadership Joint Undertaking ('the JU'),

**for the action entitled** ‘Arrowhead Tools for Engineering of Digitalisation Solutions (Arrowhead Tools)’.

#### 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

Kimmo KOSKI with ECAS id nkoskiki signed in the Participant Portal on 11/05/2019 at 17:34:33 (transaction id SigId-2077-

elxjxJfkZ7hcWSyCHrY3GRJdINk1rzrxKzzn72ZZfspy99KU QBv11LdL7xUJCOfcKnDKuuBx5pVB9vRquL2y1NG- jpJZscgsw0K0Gq8XWOOM38- rnBb5RSVXvj3WoX5Zksd4n6axRU5gE1ifnogzkKrXvV).

Timestamp by third party at

Sat May 11 18:34:38 CEST 2019

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**MODEL ANNEX 4 FOR ECSEL JU Model Grant Agreement**

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Commission européenne/Europese Commissie, 1049 Bruxelles/Brussel, BELGIQUE/BELGIË - Tel. +32 22991111