CORTEX²

D6.6– Open Call management from preparation to selection version 2

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Version	Submission date	Comments	Author
v0.1	01/09/2024	Core draft with Annexes	Iwa Stefanik (F6S)
v0.2	06/09/2024	Contribution	Ellie Shtereva (F6S)
v0.3	09/09/2024	Internal review	Violeta Naydenova (F6S)
v1.0	09/09/2024	Review	Alain Pagani (DFKI)

Disclaimer

Abstract

This deliverable is a continuation of the report 6.3 targeting the Open Call 1 (OC1) overview of the evaluation and selection process; and initiation of Open Call 2 (OC2) activities presenting (i) co-design process; (ii) external evaluators selection; (iii) overview on the received applications; and (iv) the next steps. The report is complemented by the attached documentation of OC2 developed to support the management processes: from the application to the selection, covering a set of eligibility criteria, requirements from the applicants, CORTEX² offer, evaluation process, the funding programme and contracting.

OC1 winners (10 co-development projects and 10 use-cases) were announced on the project website with a brief description of each funded project: here.

OC2 was launched on June 13, 2024, and closed on August 15, 2024. In total **91 applications were submitted** (out of 149 started) for further evaluation by the external experts. The selection results of this call will be reported in the next deliverable D6.7.

Acronyms and definitions

Acronym	Meaning
AI	Artificial Intelligence
API	Application Programming Interface
AWU	Annual Work Unit
AR	Augmented Reality
CORTEX²	COoperative Real-Time experiences with EXtended reality
EC	European Commission
ESR	Evaluation Summary Report
GA	Grant Agreement
HCI	Human Computer Interaction
HMD	Head Mounted Display
IoT	Internet of things
KPI	Key Performance Indicator
MR	Mixed Reality
MS	Member States
NLP	Natural language processing
OC	Open Call
OCT	Overseas Countries and Territories
POC	Proof of Concept
R&D	Research and Development
RTO	Research and Technology Organisations
SDK	Software Development Kit
SME	Small and medium-sized enterprises
TRL	Technology Readiness Level
UX	User Experience
VR	Virtual Reality
XR	Extended Reality

The CORTEX² project

The COVID-19 pandemic pushed individuals and companies worldwide to work primarily from home or change their work model to stay in business. Today, all the signs are that remote work is here to stay. But not all organizations are ready to adapt to this new reality, where team collaboration is vital.

Existing services and applications aimed at facilitating remote team collaboration — from video conferencing systems to project management platforms — are not yet ready to efficiently and effectively support all types of activities. And extended reality (XR)-based tools, which can enhance remote collaboration and communication, present significant challenges for most businesses.

The mission of CORTEX² is to democratise access to the remote collaboration offered by next-generation XR experiences across a wide range of industries and SMEs.

To this aim, CORTEX² will provide the following:

- Full support for **augmented reality (AR) experiences** as an extension of video conferencing systems when using heterogeneous service end devices through a novel Mediation Gateway platform.
- Resource-efficient **teleconferencing tools** through innovative transmission methods and automatic summarization of shared long documents.
- Easy-to-use and powerful **extended reality** (**XR) experiences** with instant 3D reconstruction of environments and objects, and simplified use of natural gestures in collaborative meetings.
- Fusion of vision and audio for **multichannel semantic interpretation,** and enhanced tools such as **virtual conversational agents** and **automatic meeting summarization**.
- Full **integration of internet of things (IoT) devices into XR experiences** to optimise interaction with running systems and processes.
- **Optimal extension possibilities and broad adoption** by delivering the core system with **open APIs** and launching **open calls** to enable further technical extensions, more comprehensive use cases, and deeper evaluation and assessment.

Overall, **the project invests a total of 4 million Euros in two open calls**, which will be aimed at

1. recruiting tech start-ups/SMEs to co-develop CORTEX²
2. engaging new use cases from different domains to demonstrate CORTEX² replication through specific integration paths
3. assessing and validating the social impact associated with XR technology adoption in internal and external use cases

The CORTEX² consortium is formed by 10 organizations in 7 countries, which work together for 36 months.

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1. Introduction

This deliverable is a continuation of the report 6.3 that described in detail the launching process of Open Call 1 (OC1) from the co-creation phase to the closure with 146 applications. This report carries on with presenting the evaluation process of OC1 to select 20 winning projects: 10 that will co-develop new features for CORTEX^2 in a 9-month programme and another 10 use-cases that will validate and expand the CORTEX^2 framework during a 12-month programme. All the OC1 projects kicked off their work in June 2024, their progress is monitored and supported by the mentorship assistance given by CORTEX^2 experts.

Part two of the document focuses on the Open Call 2 (OC2) activities presenting (i) co-design process; (ii) external evaluators selection; (iii) overview on the received applications; and (iv) the next steps. The report is complemented by the attached documentation of OC2 developed to support the open call management processes: from the application to the selection, covering a set of eligibility criteria, requirements from the applicants, OC2 CORTEX^2 offer, evaluation process, the funding programme and contracting.

Below is a roadmap of CORTEX2 Open Calls processes that repeat per OC1 and OC2. The status of each stage per Open Call is reported (Fig 1).

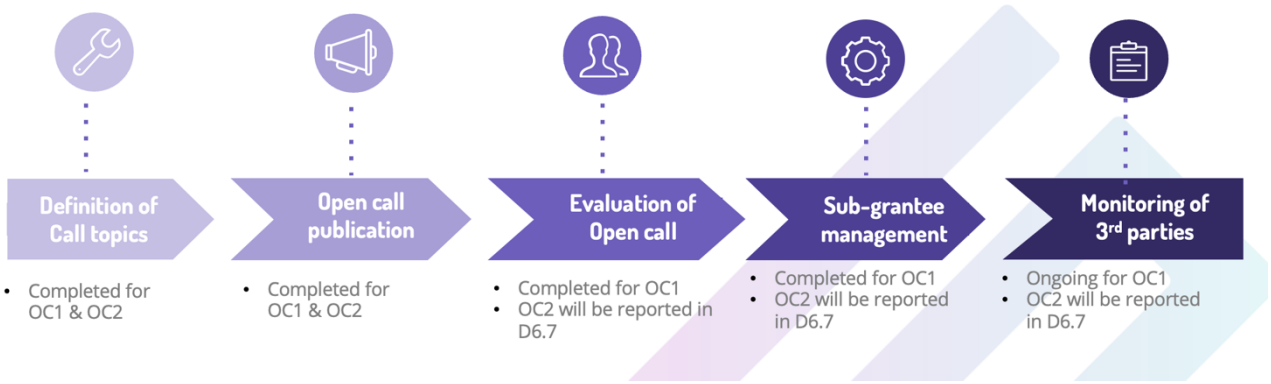


Figure 1- Open Call 1 and 2 statuses per five roadmap stages of OC processes

2. Open Call 1 (OC1) evaluation

The evaluation process for the Open Call 1 for both Tracks 1 (co-development) and Track 2 (use-case) followed a **4-step structure**, as can be seen below.

- **Step 1**: identifying eligible applications through screening the criteria defined for the call (available in D6.3)
- **Step 2**: remote evaluation by 2 external experts per application by following a provided template and a set of concrete scores per criterion, indicated in the Guidelines for Applicants
- **Step 3**: shortlisting the top projects and inviting them to an interview phase.
- **Step 4**: resolution of the call and contracting.

The table below presents the data of each of the stages. Subsections in this chapter unfold each stage in detail.

Table 1: OC1 Evaluation summary - from submission to selection

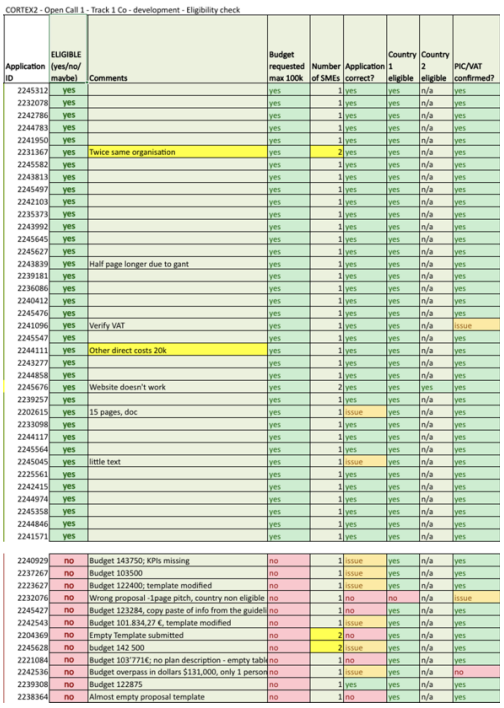
NAME	TRACK 1	TRACK 2	TOTAL
No of received applications	49	97	146
No of ineligible applications	12	13	25
No of applications for expert review	37	84	121
No of shortlisted applications[1]	18	25	43
No of selected applications	10	10	20

2.1 OC1 eligibility check

After completing the **eligibility check,** twelve applications in Track 1 and thirteen in Track 2 changed their status to ineligible due to:

- Failure to submit all the required documents
- Exceeding the maximum budget request
- Coming from an ineligible country
- Ineligible company status (not fitting the SME definition)

[1] The rule applied from the Guidelines for Applicants: at least two best scored applications per each Topic in Track 1 and two best scored applications per each Domain in Track 2 were invited to the interview.



CORTEX2 - Open Call 1 - Track 1 Co - development - Eligibility check

Application ID	ELIGIBLE (yes/no/ maybe)	Comments	Budget requested max 100k	Number of SMEs	Application correct?	Country 1 eligible	Country 2 eligible	PIC/VAT confirmed?
2245312	yes		yes	1	yes	yes	n/a	yes
2232078	yes		yes	1	yes	yes	n/a	yes
2242786	yes		yes	1	yes	yes	n/a	yes
2244783	yes		yes	1	yes	yes	n/a	yes
2241950	yes		yes	1	yes	yes	n/a	yes
2231367	yes	Twice same organisation	yes	2	yes	yes	n/a	yes
2245582	yes		yes	1	yes	yes	n/a	yes
2243813	yes		yes	1	yes	yes	n/a	yes
2245497	yes		yes	1	yes	yes	n/a	yes
2242103	yes		yes	1	yes	yes	n/a	yes
2235373	yes		yes	1	yes	yes	n/a	yes
2243992	yes		yes	1	yes	yes	n/a	yes
2245645	yes		yes	1	yes	yes	n/a	yes
2245627	yes		yes	1	yes	yes	n/a	yes
2243839	yes	Half page longer due to gant	yes	1	yes	yes	n/a	yes
2239181	yes		yes	1	yes	yes	n/a	yes
2236086	yes		yes	1	yes	yes	n/a	yes
2240412	yes		yes	1	yes	yes	n/a	yes
2245476	yes		yes	1	yes	yes	n/a	yes
2241096	yes	Verify VAT	yes	1	yes	yes	n/a	issue
2245547	yes		yes	1	yes	yes	n/a	yes
2244111	yes	Other direct costs 20k	yes	1	yes	yes	n/a	yes
2243277	yes		yes	1	yes	yes	n/a	yes
2244858	yes		yes	1	yes	yes	n/a	yes
2245676	yes	Website doesn't work	yes	2	yes	yes	yes	yes
2239257	yes		yes	1	yes	yes	n/a	yes
2202615	yes	15 pages, doc	yes	1	issue	yes	n/a	yes
2233098	yes		yes	1	yes	yes	n/a	yes
2244117	yes		yes	1	yes	yes	n/a	yes
2245564	yes		yes	1	yes	yes	n/a	yes
2245045	yes	little text	yes	1	issue	yes	n/a	yes
2225561	yes		yes	1	yes	yes	n/a	yes
2242415	yes		yes	1	yes	yes	n/a	yes
2244974	yes		yes	1	yes	yes	n/a	yes
2245358	yes		yes	1	yes	yes	n/a	yes
2244846	yes		yes	1	yes	yes	n/a	yes
2241571	yes		yes	1	yes	yes	n/a	yes
2240929	no	Budget 143750; KPIs missing	no	1	issue	yes	n/a	yes
2237267	no	Budget 103500	no	1	issue	yes	n/a	yes
2223627	no	Budget 122400; template modified	no	1	issue	yes	n/a	yes
2232076	no	Wrong proposal -1page pitch, country non eligible	no	1	no	no	n/a	issue
2245427	no	Budget 123284, copy paste of info from the guidel	no	1	no	yes	n/a	yes
2242543	no	Budget 101.834,27 €, template modified	no	1	issue	yes	n/a	yes
2204369	no	Empty Template submitted	no	2	no	yes	n/a	yes
2245628	no	budget 142 500	no	2	issue	yes	n/a	yes
2221084	no	Budget 103'771€; no plan description - empty table	no	1	no	yes	n/a	yes
2242536	no	Budget overpass in dollars $131,000, only 1 person	no	1	issue	yes	n/a	no
2239308	no	Budget 122875	no	1	yes	yes	n/a	yes
2238364	no	Almost empty proposal template	no	1	no	yes	n/a	yes

Figure 2- Eligibility check example Track 1 (same system applied to Track 2)

2.2 OC1 Expert review (follow up to D6.3)

To perform a transparent evaluation process with independent evaluators, an Open Call for interest expression for external experts was launched on the F6S platform: https://www.f6s.com/external-evaluators-for-cortex2-oc1. This step until the selection process was reported in D6.3. Below, we demonstrate the results of selected evaluators.

2.2.2 Selection of evaluators

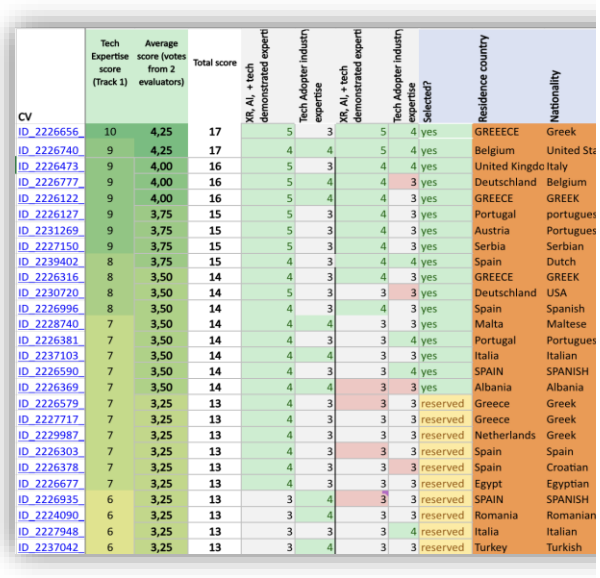
The OC for interest expression for external evaluators attracted 72 applications. Two internal experts from CORTEX[2] including the Project Coordinator performed an evaluation of the applicants in a scale 0-5 (from lowest to highest) as reported in D6.3

In the next step, they have considered the fit of each expert to the different Topics (9) and different Domains (8). The final stage required a consensus call leading to selection. In total 17 evaluators were accepted and invited to the process, and 15 finally contracted. Table 2 provides details and Figs 3 and 4 illustrate the process.

Table 2: OC1 External experts' selection - status

NAME	NUMBER OF EVALUATORS
No of evaluators applied	72

No of evaluators selected	17
No of evaluators reserved	10
No of evaluators accepted the invitation & contracted	15
No of countries represented by the selected evaluators	11



CV	Tech Expertise score (Track 1)	Average score (votes from 2 evaluators)	Total score	XR, AI, + tech demonstrated experti	Tech Adopter industry expertise	XR, AI, + tech demonstrated experti	Tech Adopter industry expertise	Selected?	Residence country	Nationality
ID_2226656	10	4,25	17	5	3	5	4	yes	GREEECE	Greek
ID_2226740	9	4,25	17	4	4	5	4	yes	Belgium	United St
ID_2226473	9	4,00	16	5	3	4	4	yes	United Kingdo	Italy
ID_2226777	9	4,00	16	5	4	4	3	yes	Deutschland	Belgium
ID_2226122	9	4,00	16	5	4	4	3	yes	GREECE	GREEK
ID_2226127	9	3,75	15	5	3	4	3	yes	Portugal	portugues
ID_2231269	9	3,75	15	5	3	4	3	yes	Austria	Portugues
ID_2227150	9	3,75	15	5	3	4	3	yes	Serbia	Serbian
ID_2239402	8	3,75	15	4	3	4	4	yes	Spain	Dutch
ID_2226316	8	3,50	14	4	3	4	3	yes	GREECE	GREEK
ID_2230720	8	3,50	14	5	3	3	3	yes	Deutschland	USA
ID_2226996	8	3,50	14	4	3	4	3	yes	Spain	Spanish
ID_2228740	7	3,50	14	4	4	3	3	yes	Malta	Maltese
ID_2226381	7	3,50	14	4	3	3	4	yes	Portugal	Portugues
ID_2237103	7	3,50	14	4	4	3	3	yes	Italia	Italian
ID_2226590	7	3,50	14	4	3	3	4	yes	SPAIN	SPANISH
ID_2226369	7	3,50	14	4	4	3	3	yes	Albania	Albania
ID_2226579	7	3,25	13	4	3	3	3	reserved	Greece	Greek
ID_2227717	7	3,25	13	4	3	3	3	reserved	Greece	Greek
ID_2229987	7	3,25	13	4	3	3	3	reserved	Netherlands	Greek
ID_2226303	7	3,25	13	4	3	3	3	reserved	Spain	Spain
ID_2226378	7	3,25	13	4	3	3	3	reserved	Spain	Croatian
ID_2226677	7	3,25	13	4	3	3	3	reserved	Egypt	Egyptian
ID_2226935	6	3,25	13	3	4	3	3	reserved	SPAIN	SPANISH
ID_2224090	6	3,25	13	3	4	3	3	reserved	Romania	Romanian
ID_2227948	6	3,25	13	3	3	3	4	reserved	Italia	Italian
ID_2237042	6	3,25	13	3	4	3	3	reserved	Turkey	Turkish

Figure 3- OC1 External experts' selection: winners and reserved

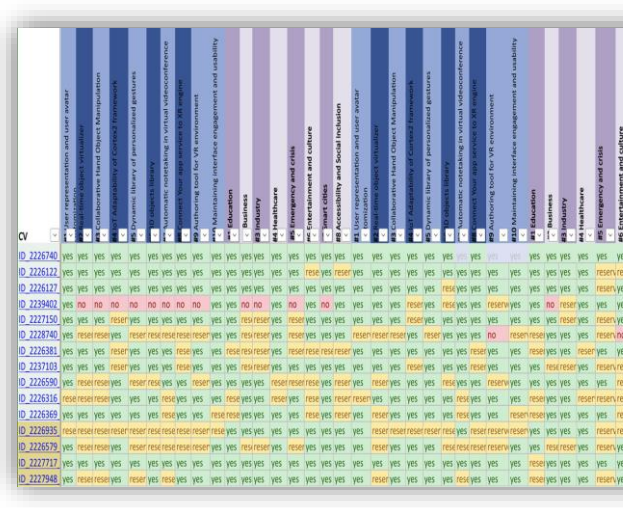


Figure 4- OC1 External experts' selection - expertise fit per Topic and Domain

2.2.3 OC1 Remote evaluation

The external evaluators were invited to a webinar for evaluators run on 15 February 2024. They were instructed on the process covering: (1) CORTEX^2 introduction; (2) OC1 fundamentals per Track 1 and Track 2; (3) Evaluation materials, procedures, timeline; (4) F6S platform navigation; (5) Does and Don'ts; (6) Q&A.

The selected evaluators were assigned to review proposals within their areas of expertise. Each application was assessed by two external evaluators.

To ensure compliance with high standards regarding evaluation, conflict of interest and confidentiality, each external evaluator had to commit to the following:

1. that they will perform a confidential, fair and equitable evaluation;
2. confidentiality and absence of conflict of interest (disqualifying or potential);
3. that they will not discuss the proposals with others during the process;
4. that they will not get in contact with applicants under any circumstances.

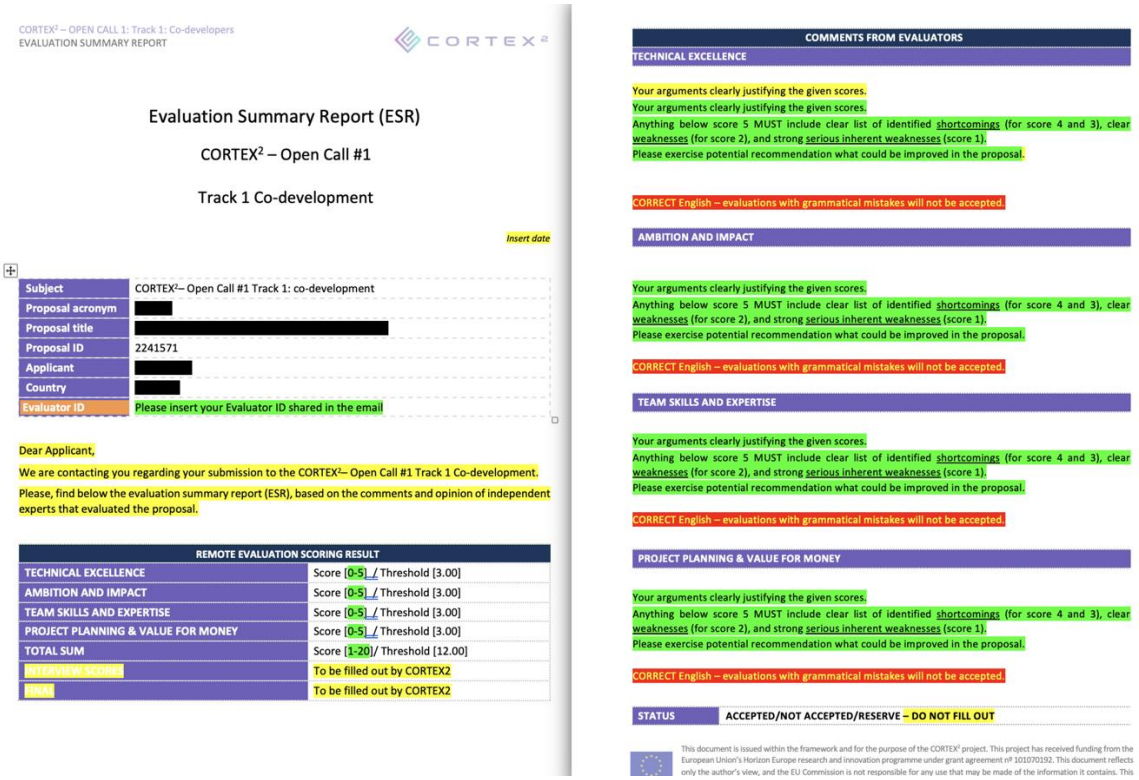
The evaluators were working in a twofold stage: first, they were assigned with access to the applications in the F6S pipeline, where they scored directly each application per four different criteria (1-Technical excellence; 2- Ambition and impact; 3- Team skills and expertise; 4- Project planning and value for money). In the second step, they had to provide justification of the scoring in the Evaluation Summary Report (Fig 5).

A scale of evaluation:

- 0 = Proposal fails to address the criterion or cannot be assessed due to missing or incomplete information.
- 1 = Poor: criterion is inadequately addressed or there are serious inherent weaknesses.
- 2 = Fair: proposal broadly addresses the criterion, but there are significant weaknesses.
- 3 = Good: proposal addresses the criterion well, but several shortcomings are present.
- 4 = Very good: proposal addresses the criterion very well, but a small number of shortcomings are present.
- 5 = Excellent: proposal successfully addresses all relevant aspects of the criterion. Any shortcomings are minor.

In total, **242 evaluations were performed for both Tracks** (Track 1 - 74; Track 2 - 168) by 15 evaluators on average assessing 16 applications. The remote evaluation followed a series of consensus meetings leading to **shortlisting[2] 43 projects** (Track 1 – 18; Track 2 – 25).

[2] The rule applied from the Guidelines for Applicants: at least two best scored applications per each Topic in Track 1 and two best scored applications per each Domain in Track 2 were invited to the interview.



CORTEX² – OPEN CALL 1: Track 1: Co-developers
EVALUATION SUMMARY REPORT

CORTEX²

Evaluation Summary Report (ESR)

CORTEX² – Open Call #1

Track 1 Co-development

Insert date

Subject	CORTEX²– Open Call #1 Track 1: co-development
Proposal acronym	[redacted]
Proposal title	[redacted]
Proposal ID	2241571
Applicant	[redacted]
Country	[redacted]
Evaluator ID	Please insert your Evaluator ID shared in the email

Dear Applicant,

We are contacting you regarding your submission to the CORTEX²– Open Call #1 Track 1 Co-development.

Please, find below the evaluation summary report (ESR), based on the comments and opinion of independent experts that evaluated the proposal.

REMOTE EVALUATION SCORING RESULT	
TECHNICAL EXCELLENCE	Score [0-5] / Threshold [3.00]
AMBITION AND IMPACT	Score [0-5] / Threshold [3.00]
TEAM SKILLS AND EXPERTISE	Score [0-5] / Threshold [3.00]
PROJECT PLANNING & VALUE FOR MONEY	Score [0-5] / Threshold [3.00]
TOTAL SUM	Score [1-20]/ Threshold [12.00]
INTERVIEW SCORE	To be filled out by CORTEX2
RANK	To be filled out by CORTEX2

COMMENTS FROM EVALUATORS

TECHNICAL EXCELLENCE

Your arguments clearly justifying the given scores.
Your arguments clearly justifying the given scores.
Anything below score 5 MUST include clear list of identified shortcomings (for score 4 and 3), clear weaknesses (for score 2), and strong serious inherent weaknesses (score 1).
Please exercise potential recommendation what could be improved in the proposal.

CORRECT English – evaluations with grammatical mistakes will not be accepted.

AMBITION AND IMPACT

Your arguments clearly justifying the given scores.
Anything below score 5 MUST include clear list of identified shortcomings (for score 4 and 3), clear weaknesses (for score 2), and strong serious inherent weaknesses (score 1).
Please exercise potential recommendation what could be improved in the proposal.

CORRECT English – evaluations with grammatical mistakes will not be accepted.

TEAM SKILLS AND EXPERTISE

Your arguments clearly justifying the given scores.
Anything below score 5 MUST include clear list of identified shortcomings (for score 4 and 3), clear weaknesses (for score 2), and strong serious inherent weaknesses (score 1).
Please exercise potential recommendation what could be improved in the proposal.

CORRECT English – evaluations with grammatical mistakes will not be accepted.

PROJECT PLANNING & VALUE FOR MONEY

Your arguments clearly justifying the given scores.
Anything below score 5 MUST include clear list of identified shortcomings (for score 4 and 3), clear weaknesses (for score 2), and strong serious inherent weaknesses (score 1).
Please exercise potential recommendation what could be improved in the proposal.

CORRECT English – evaluations with grammatical mistakes will not be accepted.

STATUS ACCEPTED/NOT ACCEPTED/RESERVE – DO NOT FILL OUT

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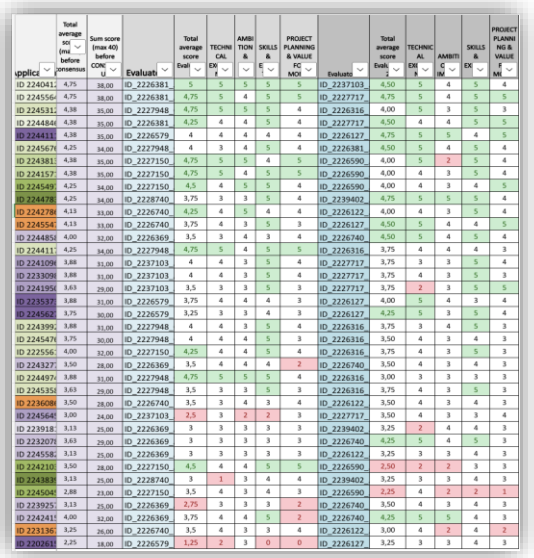
Figure 5- OC1 Evaluation Summary Report – example for Track 1 (same for Track 2)



Applica	Total average score before consensus	Sum score (max 40) before CONSU	Evaluati	Total average score Excel	TECHNICAL EXCEL	AMBITION & IMPA	SKILLS & EXPE	PROJECT PLANNING & VALUE FOR MONEY	Evaluato	Total average score Excel	TECHNICAL EXCEL	AMBITION & IMPA	SKILLS & EXPE	PROJECT PLANNING & VALUE FOR MONEY
ID 224041	4,75	38,00	ID_2226381_	5	5	5	5	5	ID_2237103_	4,50	5	4	5	4
ID 224556	4,75	38,00	ID_2226381_	4,75	5	4	5	5	ID_2227717_	4,75	5	4	5	5
ID 224531	4,38	35,00	ID_2227948_	4,75	5	5	5	4	ID_2226316_	4,00	5	3	5	3
ID 224484	4,38	35,00	ID_2226381_	4,25	4	4	5	4	ID_2227717_	4,50	4	4	5	5
ID 224411	4,38	35,00	ID_2226579_	4	4	4	4	4	ID_2226127_	4,75	5	5	4	5
ID 224567	4,25	34,00	ID_2227948_	4	3	4	5	4	ID_2226381_	4,50	5	4	5	4
ID 224381	4,38	35,00	ID_2227150_	4,75	5	5	4	5	ID_2226590_	4,00	5	2	5	4
ID 224157	4,38	35,00	ID_2227150_	4,75	5	4	5	5	ID_2226590_	4,00	4	3	5	4
ID 224549	4,25	34,00	ID_2227150_	4,5	4	5	5	4	ID_2226590_	4,00	4	3	4	5
ID 224478	4,25	34,00	ID_2228740_	3,75	3	3	5	4	ID_2239402_	4,75	5	5	5	4
ID 224278	4,13	33,00	ID_2226740_	4,25	4	5	4	4	ID_2226122_	4,00	4	3	5	4
ID 224554	4,13	33,00	ID_2226740_	3,75	4	3	5	3	ID_2226127_	4,50	5	4	4	5
ID 224485	4,00	32,00	ID_2226369_	3,5	3	4	3	4	ID_2226740_	4,50	5	4	5	4
ID 224411	4,25	34,00	ID_2227948_	4,75	5	4	5	5	ID_2226316_	3,75	4	4	4	3
ID 224109	3,88	31,00	ID_2237103_	4	4	3	5	4	ID_2227717_	3,75	3	3	5	4
ID 223309	3,88	31,00	ID_2237103_	4	4	3	5	4	ID_2227717_	3,75	4	3	5	3
ID 224195	3,63	29,00	ID_2237103_	3,5	3	3	5	3	ID_2227717_	3,75	2	3	5	5
ID 223537	3,88	31,00	ID_2226579_	3,75	4	4	4	3	ID_2226127_	4,00	5	4	3	4
ID 224562	3,75	30,00	ID_2226579_	3,25	3	3	4	3	ID_2226127_	4,25	5	3	5	4
ID 224399	3,88	31,00	ID_2227948_	4	4	3	5	4	ID_2226316_	3,75	3	4	5	3
ID 224547	3,75	30,00	ID_2227948_	4	4	4	5	3	ID_2226316_	3,50	4	3	4	3
ID 222556	4,00	32,00	ID_2227150_	4,25	4	4	5	4	ID_2226316_	3,75	4	3	5	3
ID 224327	3,50	28,00	ID_2226369_	3,5	4	4	4	2	ID_2226740_	3,50	4	3	4	3
ID 224497	3,88	31,00	ID_2227948_	4,75	5	5	5	4	ID_2226316_	3,00	3	3	3	3
ID 224535	3,63	29,00	ID_2227948_	3,5	3	3	5	3	ID_2226316_	3,75	4	3	5	3
ID 223608	3,50	28,00	ID_2226740_	3,5	3	4	3	4	ID_2226122_	3,50	4	3	4	3
ID 224564	3,00	24,00	ID_2237103_	2,5	3	2	2	3	ID_2227717_	3,50	4	3	3	4
ID 223918	3,13	25,00	ID_2226369_	3	3	3	3	3	ID_2239402_	3,25	2	4	4	3
ID 223207	3,63	29,00	ID_2226369_	3	3	3	3	3	ID_2226740_	4,25	5	4	5	3
ID 224558	3,13	25,00	ID_2226369_	3	3	3	3	3	ID_2226122_	3,25	3	3	4	3
ID 224210	3,50	28,00	ID_2227150_	4,5	4	4	5	5	ID_2226590_	2,50	2	2	3	3
ID 224383	3,13	25,00	ID_2228740_	3	1	3	4	4	ID_2239402_	3,25	3	3	4	3
ID 224504	2,88	23,00	ID_2227150_	3,5	4	3	4	3	ID_2226590_	3,25	4	2	2	3
ID 223925	3,13	25,00	ID_2226369_	2,75	3	3	3	2	ID_2226740_	3,50	4	3	4	3
ID 224241	4,00	32,00	ID_2226369_	3,75	4	4	5	2	ID_2226740_	4,25	5	5	4	3
ID 223136	3,25	26,00	ID_2226740_	3,5	4	3	3	4	ID_2226122_	3,00	4	2	4	2
ID 220261	2,25	18,00	ID_2226579_	1,25	2	3	0	0	ID_2226127_	3,25	3	3	4	3

Figure 6- OC1 Remote evaluation - example Track 1 (same system in Track 2)

2.2.4 OC1 Interview

As part of this second evaluation phase, a series of 43 brief online interviews (40 and 45 minutes for Track 1 and Track 2 respectively) were conducted with each shortlisted team. The agenda and specific requirements from the candidates are presented in Fig 7.

The interviews were attended by:

- The applicant's team
- Moderator – Open Call Manager (F6S)
- CORTEX^2 internal expert of the Topic (Track 1), Domain (Track 2)
- CORTEX^2 Project Coordinator and/or Technical Manager
- CORTEX^2 Legal Advisor regarding ethics – on demand to the applications with identified higher risks

At the end of each interview, the moderator collected final remarks through two surveys: one for the external evaluators and one CORTEX^2 experts attending the interview.

The external evaluator survey covered:

- confirming if all the questions from the remote evaluation were clarified with the applicant
- providing the final score of the application by changing or confirming the scores according to the interview performance
- any final remarks to consider in the selection

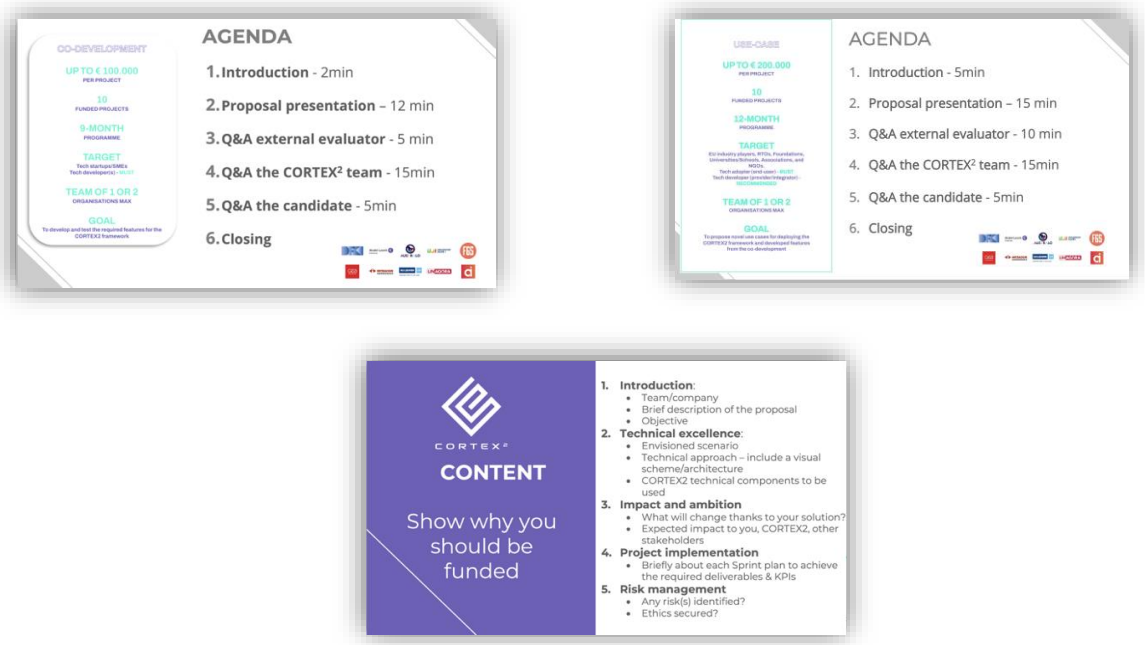


Figure 7- OC1 Interview – Track 1 and Track 2 agenda; 3rd party presentation requirements

The internal experts survey covered the following questions:

Ethics section – answered only by the representative from the KUL university from WP4

- Do you recognize any ethical risk factors that may lead to the failure of this project or overall concerns? If yes, please list the risk factors and/or ethical concerns.
- Who from the KUL organisation could monitor this project from the ethical perspective?
- Are you already aware/predict the ethical requirements for this project?
- From the ethical point of view, do you as an expert have any concerns for funding this project?
- Final words, is there anything more you would like to communicate about this project from the ethical point of view that was not covered in the survey but is essential for the CORTEX^2 ethics legal frame.

Technical section

- From your perspective, do you confirm CORTEX^2 interest in the type of innovation proposed by the applicant?
- Do you confirm CORTEX^2 support activities and/or components needed (if any) are ready and adequate for this project successful implementation?
- Who should be an assigned Mentor for this project, in case it is selected?
- Do you confirm this project is feasible to be performed within the 9-month frame (Track 1) or 12-month (Track 2)? In case not, please list your concerns.
- Did concerns/questions raised during the interview (if any) have been clarified in your opinion?
- Do you recognize any potential risk factors leading to failure of this project? If yes, please list them.
- Final words, is there anything more you would like to communicate about this project that was not covered in the survey but is essential for the CORTEX^2 interest, e.g. any legal issues, technology incompatibility, etc.

The collected feedback served as a final pass or fail for the applicant's project and their technical solutions to be integrated in the CORTEX^2 ecosystem.

2.3 Results

After the assessment of the feedback 20 best fitting projects were selected (10 per Track 1 and Track 2 respectively). The list of selected projects is available at https://cortex2.eu/2024/08/07/cortex2-open-call-1-winners/

Figure 8- OC1 selected projects - type of Beneficiary and country representation

Table 3: OC1 Track1 winners - brief overview

No	Project ACRONYM	Project full title	Brief description	Name of the Beneficiary	Type of Beneficiary	Country
1	AR	ARY the AR Media	ARY is an AR media which offers the capability to anchor 3D objects, video, picture, double numeric, pdf file, into indoor environment and make those virtual elements available to anyone using a smartphone or other device.	ARY SAS	Startup	France
2	CDLPG	Co-development of a Dynamic library of personalized gestures	The core of the proposed work involves creating a module capable of accurately capturing and interpreting a wide range of hand gestures. These gestures, once recorded, can be associated with specific semantic interpretations and actions within the application.	Sensorama Lab LLC	SME	Ukraine
3	EXTERNALISE	Enabling support for externalising models in XR collaboration	It will develop a disruptive multi-user collaboration and communication module that will change the way teams and groups collaborate remotely. By focusing on digitising and streaming the human characteristics that encode the	MOVERSE PC	Startup	Greece

			non-verbal cues which compose the human body language, EXTERNALISE will enrich users' representation and boost their expressivity during communication.			
4	FLYTEX	Enhancing Videoconferences with Real-Time IoT Data in agrifood sector	The project aims to revolutionize decision-making in the agricultural sector by providing real-time IoT sensor data during videoconferences. The project will enhance the quality, speed, and efficacy of decision-making processes, making it a vital tool in the modern agricultural landscape. The project targets the integration of advanced IoT technologies within the CORTEX2 framework, focusing on the agri-food industry.	FlyThings Technologies	SME	Spain
5	MGL	Magos Gestures Library	The proposed project aims to develop and integrate the Magos Gestures Library (MGL) module into the CORTEX² framework, optimizing the interactions landscape of extended reality (XR) applications.	Quanta & Qualia	Startup	Greece
6	MHI	Multiplayer Haptic interactions	The project is embarking on the development of a multiplayer toolkit, designed to empower XR developers in seamlessly creating interactive virtual environments featuring haptic gloves and hand tracking. The strategy involves harnessing the capabilities of the CORTEX2 framework, specializing in the management of multiplayer objects, avatars, and scenes.	SenseGlove B.V.	Startup	The Netherlands
7	RAX	Realistic Avatars for XR	Project RAX takes inspiration from its namesake (the Alps mountainous range) to set a high but realistic ambition for developing a scalable, automatic, integrated tool for realistic, customisable, interoperable, multimodal Avatars that will be integrated with the CORTEX² technological ecosystem to extend its capabilities by covering	IGOODI SRL	SME	Italy

			User Representation as well as User Avatar Customization.			
8	SENSO3D	Revolutionizing Virtual Spaces: SENSO3D's Comprehensive 3D Object Library	The project envisions the creation of detailed and accurate 3D models for extended reality (XR) applications, with a particular focus on areas such as elder care, language learning, and interactive education. By converting 2D images into immersive 3D environments, SENSO3D enhances visualization and interaction, offering substantial benefits to users, including those with special needs.	Sensomatt Lda.	SME	Portugal
9	TIP	The Infinity Palette	The project aims to enrich the Cortex platform with an innovative 2D/3D asset library, optimized for Unity and Mozilla Hubs. Focusing on Education and Entertainment & Culture sectors, the project plans to create immersive and adaptable learning environments including a traditional classroom, a group study room, and a library for individual learning, alongside interactive spaces for virtual concerts and cultural exhibitions.	3D Interactive Sthlm AB	SME	Sweden
10	VISOR	VIrtualization Service for Object Reconstruction	The project proposes a web service that will take images or a video stream of a small object and generate a digital-twin as a triangular mesh, that can be used by all current XR applications and game engines and be visualised on any device, enabling easy sharing of the 3D model across multiple stakeholders.	Phasmatic Private Company	SME	Greece

Table 4: OC1 Track 2 winners - brief overview

No	Project ACRONYM	Project full title	Brief description	Name of the Beneficiary	Type of Beneficiary	Country
1	AgriVision	Extended Reality for Efficient and Sustainable Farming	AgriVision is a transformative solution for the agriculture sector. It integrates XR with FMIS, revolutionising how farmers interpret complex data through intuitive, immersive visualisations. The Agrivision will be offered in two versions: (a) a "lite version" aiming to run on	Beneficiery 1 - bSpoke Solutions L.P. Benefieciery 2 – University of Macedonia	Beneficiery 1 – SME Beneficiery 2 - University	Greece

			farmers mobile devices; and (b) a “pro version” aiming to fully utilise XR capabilities, utilising dedicated XR devices, such as Hololens.			
2	C.A.R.E. XR	Critical Awareness and Response Enhancement with eXtended Reality	The C.A.R.E. XR project aims to revolutionize emergency management by integrating Extended Reality (XR) with the Next-Generation Incident Command System (NICS). It will enhance situational awareness and decision-making through real-time, 3D XR visualizations, and IoT data integration. The C.A.R.E. XR project is set to establish a new standard in emergency response, reduce operational times, and increase safety for both responders and civilians.	Beneficiary 1: South East European University Beneficiary 2: Crisis Management Center	Beneficiary 1: University Beneficiary 2: Governmental Institution	North Macedonia
3	CORE-MHC	CO-facilitated and REmote Mixed-Reality Mental Health Care interventions	Accessible solution for remote therapeutic activities. By making therapy engaging, interactive, and accessible, the proposed solution aims to benefit a diverse range of individuals, including youth, the elderly, and those differently abled.	Beneficiery 1: Instituto Technologico de informatica Beneficiery 2: Fundación SASM	Beneficiery 1: Reserach organization Beneficiery 2: Foundation	Spain
4	FocusVR-ADHD	FocusVR: ADHD VR Solutions	FocusVR: ADHD VR Solutions is a pioneering project integrating cutting-edge Virtual Reality (VR) technology to revolutionize ADHD management. It aims to design immersive VR scenarios specifically tailored to improve cognitive skills in ADHD patients, including attention, memory, and emotional regulation. The project promises significant advancements in ADHD therapy, offering a novel, effective tool for patients and clinicians alike, and setting new standards in VR-based healthcare solutions.	Beneficiary 1: RTE Lab sp. z.o.o. Beneficiary 2: Medical University of Lodz	Beneficiary 1: SME Beneficiary 2: University	Poland
5	HYMNE	Hybrid Music, New Experiences	With the HYMNE use case in CORTEX2 we will open a new angle to Hybrid Music events. We will not focus on the largest crowd at the same time, but on the largest audience over time. We will create interactive	Beneficiary 1: 4DR Studios BV Beneficiary 2: Effenaar	Beneficiary 1: SME Beneficiary 2: Foundation	Netherlands

			immersive concerts that are unique every time you visit. And it will be unique because you, the audience, will play an import part in the entire interactive experience.			
6	SCIPLANT	Sustainable City Planning Tool	The Sustainable City Planning Tool (SCIPLANT) is an innovative XR-based application designed to revolutionize urban planning. It integrates immersive technologies with real-time data to create dynamic urban models, enhancing efficiency and accuracy in city planning. Aimed at fostering sustainable development, this tool facilitates collaborative decision-making among urban planners, architects, government officials, and citizens. SCIPLANT gender-neutral design and customizable features ensure accessibility and inclusivity, accommodating a diverse range of user needs.	Beneficiary: Mercury Retrograde LDA	Beneficiary 1: Startup	Portugal
7	SELFEX2	Real-Time remote dexterity training for “hands-on” industrial applications	SELFEX2 aims to improve training processes in manufacturing by using wearable finger tracking gloves and XR. It will allow for a synchronous self-training approach that provides a quantifiable degree of readiness to execute a dexterity-based task in the workplace. The concept is based on gathering senior operators´ movements using finger tracking gloves, the visualization of these movements by junior operators, and the eventual repetition of the tasks by the junior, thus obtaining a degree of similarity.	Beneficiary 1: CTAG – Automotive Technology Center of Galicia Beneficiary 2: SmartFlexCell Solutions S.A.	Beneficiary 1: Research organisation Beneficiary 2: SME	Spain
8	vScientist	Immersive Exploration of Fluid Dynamics: Developing an XR/VR Platform for CFD virtual testing in Education and Social Inclusion	The project will develop a comprehensive XR&VR platform for enhancing the learning and accessibility of Computational Fluid Dynamics (CFD) for students and individuals from diverse backgrounds, promoting social inclusion and accessibility in STEM fields. vScientist will be a straightforward, semi-automated workflow for	Beneficiary 1: National Technical University of Athens (NTUA) Beneficiary 2: MultiFluidX - Lyras EE	Beneficiary 1: University Beneficiary 2: SME	Greece

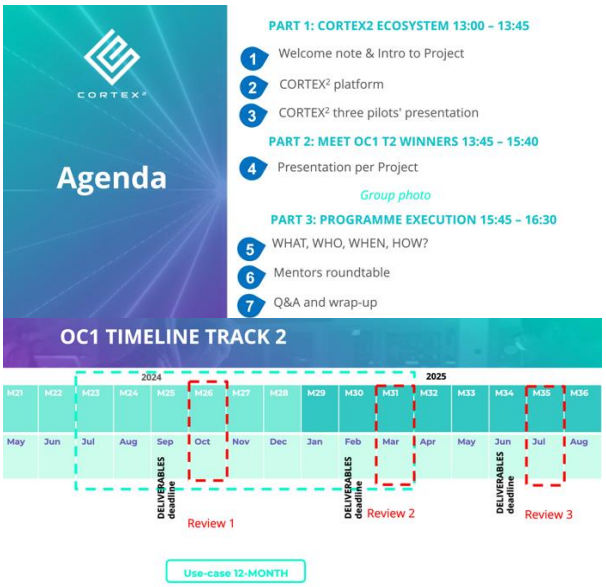
			enhanced viewing of CFD results and associated data in an immersive virtual environment (IVE). Through this revolutionary platform, users will visualise, interact, and analyse 3D virtual experiments in an immersive environment, or run their own in seconds using machine learning (ML) without using a single CPU hour and have expensive hardware.			
9	XRehab	Extended Reality for Neurological Rehabilitation	The project aims to design, create, and test a cutting-edge virtual reality (VR) simulation environment tailored for use in hospital settings to support rehabilitation. The primary objective is to provide a versatile tool available across all existing VR platforms, offering immersive or semi-immersive experiences with various modes of interaction. The project aims to simplify the creation of immersive experiences, with the foresight of facilitating future use in home environments.	Beneficiary 1: Nemo Lab Srl Beneficiary 2: Deep Reality Srl	Beneficiary 1: SME Beneficiary 2: Startup	Italy
10	XRisis	Emergency Crisis Simulation & Preparedness Metaverse Toolkit	XRisis leverages a real time collaborative communication functionality to create inclusive, engaging and easily repeatable simulated virtual crisis environments but without the associated danger encountered in the real world. The project will implement and pilot an MVP for collaborative emergency and crisis management training and upskilling. Three exemplar crisis management pilots will be built on top of CORTEX2 & its services.	Beneficiary 1: Nuwa Ltd (trading as XR Ireland) Beneficiary 2: Action Contre La Faim	Beneficiary 1: SME Beneficiary 2: NGO	Beneficiary 1: Ireland Beneficiary 2: France

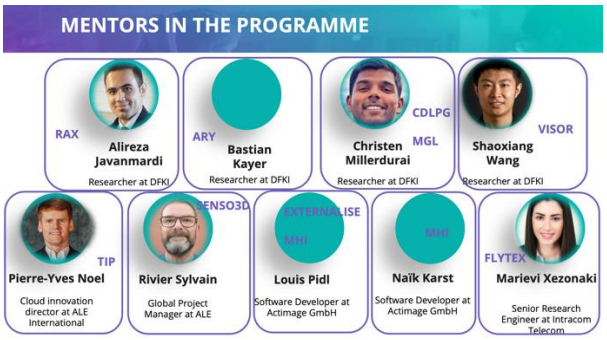
The projects were contracted by DFKI and started the programme in July 2024, after attending the Kick off meetings (Track 1 on 5/07 and Track 2 on 8/07/2024). During the Kick off all Beneficiaries presented their winning project to the rest of the group, and the CORTEX^2 Consortium. These two online events (3.5h each) served as introduction to the programme, and 1st networking opportunity. The 1st review of the work developed by the 3rd parties is scheduled for October 2024. The next deliverable will outline the programme structure of the monitoring and mentoring programme, as well as first outcomes.

Table 5: OC1 Kick off Track 1 and Track 2: agenda, timeline, mentors in the programme

OC1 Track 1 Kick off

OC1 Track 2 Kick off





3 Open Call 2 (OC2)

Building on the results of Open Call 1, the project organised its second Open Call 2 **investing a total of €1.000.000** to deliver an inclusive XR teleconference platform while involving organisations in the 'Lab-To-Market' stage that will bring new modules and features, enhancing the functionalities and opportunities CORTEX^2 can provide. The OC2 targeted technology developers (e.g. Startups, SMEs, Research Centres).

The OC2 was running for 2 months, attracting applications to select 10 co-development projects with a maximum funding of up to €100.000 for 9 months programme.

Figure 9- CORTEX² OC2 'must know'

3.1 CORTEX² OC2 co-creation

The OC2 offer was co-designed by a series of workshops conducted with the whole project consortium. As a starting point, the outcomes and selected applicants from Open Call 1 were reviewed, fostering a shared understanding of the existing internal and external co-development activities and agreed-upon modules and features to be developed as part of the CORTEX² virtual teleconference platform. During the collaborative sessions with the CORTEX² partners, new topics and challenges were identified, shaped by the project's needs, technical requirements, and the expertise available within the CORTEX² Consortium. As a result, the scope, definition, and requirements for OC2 were clearly established.

Figure 10- CORTEX² OC2 design, topics, and offer

Co-design workshops

F6S as the leader of the task 6.4 *Grant definition and Open Call Management* organised two co-design workshops guiding partners in the definition of the open call topics, challenges, expectations and as well available support for third parties to be listed in the call documentation. The co-design for Open Call 2 was very effective and streamlined since the partners have gone already through a detailed guidance on the procedure as part of Open call 1. The process replicated the framework for Open Call 1, where each partner had to suggest a

challenge, with explanation following a template provided by F6S. The template to be filled included information on:

- Identification of a Topic (challenge)
- Justification of the above - why it is relevant and important for CORTEX^2
- Challenge requirements - what condition and capacity are needed for successful addressing of the defined topic/challenge; e.g. minimum Technology Readiness Level (TRL), Open source, programming language, and other.
- What would be the ideal applicant/company profile to apply - focus on expertise and skills required.
- What would be the required deliverables as a form of controlling the progress and validating the achievements?
- What would be relevant KPIs to monitor?
- What technical support would be required from CORTEX^2 to the successful applicant(s)?
- Who within the consortium would be an expert evaluating the progress of the 3rd party for this specific challenge/topic/domain
- What is the expected outcome from the 3rd party at the end of the OC1 programme?

A total of 14 topics were developed by the consortium. The suggested topics were stored on the project's repository and shared with all the partners for review. During an online session held on April 11, 2024 each "owner" of a specific challenge presented their suggestion to the consortium for feedback. As an outcome of the session feedback for refinement, merge or removal of topics was gathered, documented and shared with the relevant challenge owners. A follow up of 1 to 1 meetings between challenge owners for refinement and merging of the topics were conducted. After the refinement and topic voting orchestrated by F6S, on May 6, 2024 a selection of 8 specific topics was confirmed for Open Call 2 with an addition of an open topic, as it was the case for Open Call 1, via which applicants were free to submit their own project idea aligned with the CORTEX2 and Open Call objectives.

The detailed Topics profiles and requirements are described in Annex 1 "Guidelines for Applicants" (p. 14, Section 2 "Call for Proposals").

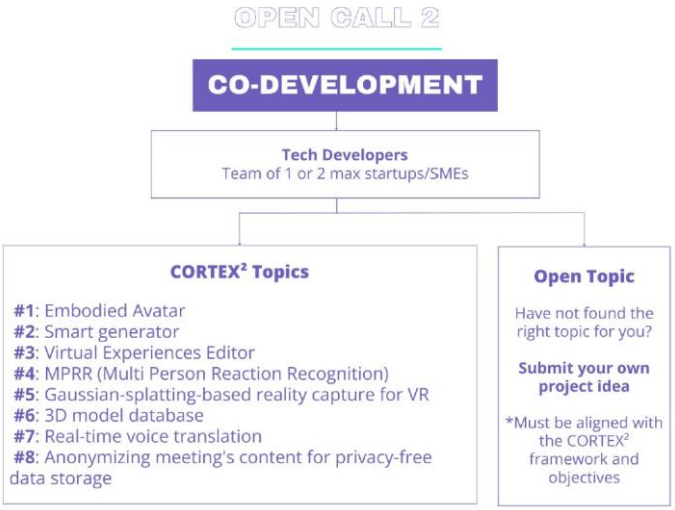


Figure 11- CORTEX² OC2 Topics for co-development

Following the co-designing processes CORTEX² shaped the OC2 offer that reflects the project's mission, technical needs and expected impact coming from the 3rd parties and in line with the original plan from the Grant Agreement (GA).

"Open Call #2 Co-development aims to recruit tech Startups, SMEs and/or research organisations to participate in the co-development of CORTEX² with the goal to build value added services based on the CORTEX² framework leveraging their expertise on specific market segments"

Type of application	Target and goal	Expected outcome	# funded projects	Who can apply
Co-development	For tech Startups/SMEs and/or research organisations to participate in the co-development of CORTEX²: (1) addressing the topics defined by the CORTEX² team, or (2) open topic submitted by the applicant within the scope of the CORTEX² objectives.	Build value-added services based on the CORTEX² framework leveraging third parties' expertise on specific market segments.	10	**Single or max 2 entities** Startups/SMEs Research organisations Acting as Tech developer(s)/provider(s)

Figure 12- Open Call 2 characteristics

3.2 OC2 documentation and launching

In parallel to the co-design sessions, a review of the Open Call documentation was conducted to understand whether there are any needs for improvement.

As an outcome of this review the following updates were introduced to the Open Call 2 documents:

- **Annex 1 Guidelines for applicants** – An additional sentence was introduced under Section 5: Online interview: "For applications where potential ethical considerations were identified in previous evaluation stages, an ethical expert from the consortium will be invited to the interview to assess these aspects".
- **Annex 2.1 CORTEX^2 Proposal template** – Five improvements were introduced:

1. Instructions Page: The sentence regarding the "page limit" was expanded for clarity. From the previous text available "The page limit for full proposal is 10 pages (not including cover page, table of content page and the Ethical/Security Checklist). All tables, figures, references and any other element pertaining to these sections must be included as an integral part of these sections" to "The page limit for full proposal is **15 pages** (including cover page, table of content page and the Ethical/Security Checklist). All tables, figures, references and any other element pertaining to these sections must be included as an integral part of these sections". The text itself does not modify the instructions but rather streamline them in some instances applicants were having doubts in relation to what is included and what not in the page limit.
2. Section 3.2 KPIs: Additional explanation was provided
   From "Additional KPIs to measure your project's success can be agreed at the 1st Sprint on the programme between the beneficiary and the CORTEX^2 Consortium" to "You can add more KPIs at the submission stage, nevertheless, please remember that additional KPIs to measure your project's success can be also agreed at the 1st Sprint on the programme between the beneficiary and the CORTEX^2 Consortium".
3. Section 5.2 Value for money: Additional explanation was provided
   From "Notice that a PM is a metric for expressing the effort of a person dedicated full time in one month. Provide a description of expected costs and the requested total contribution using the table" to "Provide a description of expected costs and the requested total contribution using the table. Write only the costs that will be funded by the CORTEX^2 project. Do NOT include any cost that will be covered by your own resources or other means. Notice that a PM is a metric for expressing the effort of a person dedicated full time in one month".
4. Section 5.2 Value for money: Additional explanation was provided
   From "The maximum amount of funding that a **single SME/Startup or maximum 2** may receive from CORTEX^2 is up to 100.000 EUROs via any mean" to "Note: subcontracting is not recommended and can be considered ONLY if minor (less than 15%) with strong justifications and alignment to the tasks. The funded parties are expected to have the core skills to successfully deliver the project".
5. The following sentence was added at the end of the proposal: "Applications with a total budget of more than 100.000 EUR are NOT eligible and will be discarded without further evaluation".

The updates were made following a careful evaluation of the applications received under Open Call 1 and the identification of possible improvements.

Launching

The OC2 was launched on the 13th of June 2024 and closed on the 15th of August 2024, at 17:00 CEST. For the period of 2 months, the OC2 was actively promoted through mass campaigns and supported with 2 live webinars providing relevant content to the applicants and giving an opportunity to ask questions. Applications were submitted via the F6S platform at https://www.f6s.com/cortex2-open-call-2-for-co-developers/apply

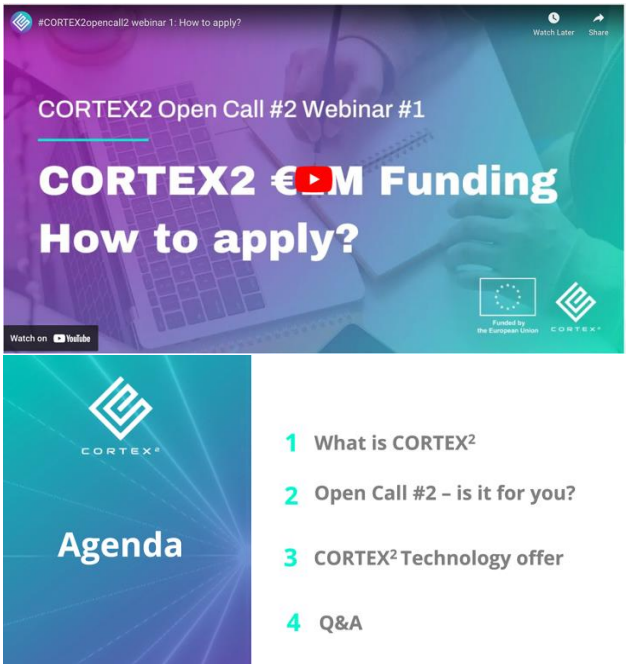
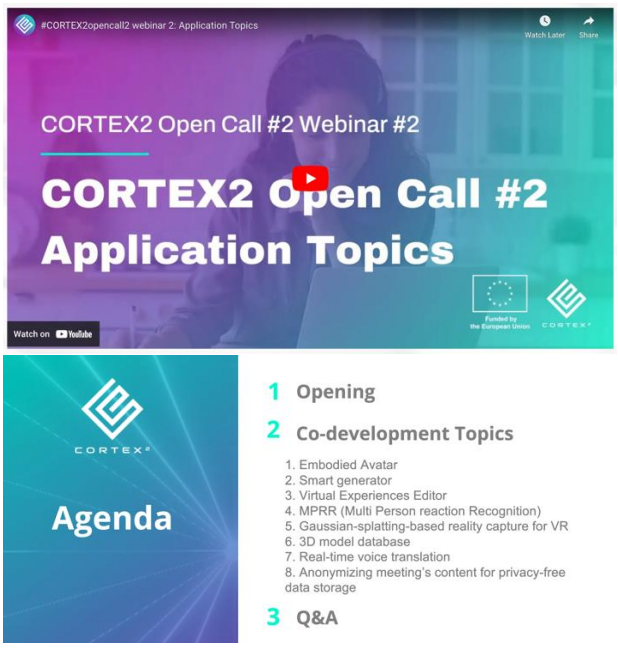
3.3 OC2 Supportive activities for applicants

F6S performed a series of support activities to ensure comprehensive guidance and retain the interest of potential third-party applicants for the OC2 opportunity. These activities are integral to the broader effort organised and executed by the communication lead partner, Australo.

3.3.1 Informative webinars

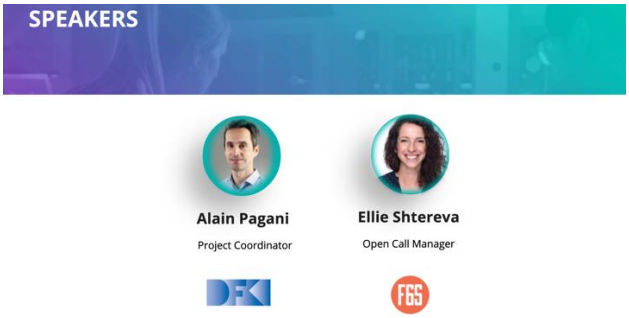
As part of the promotional activities two webinars were organised to provide comprehensive information about the OC2 and address any queries potential applicants might have regarding applying. The table below outlines the structure of these webinars. Both webinars attracted 142 attendees.

Table 6- OC2 webinars overview

Webinar 1 (12/07/2024) - link	**Webinar 2** (31/07/2024) - link
	
Goal: Introduction of the CORTEX² project, mission, technology and the funding opportunity	**Goal:** Outline the technical requirements and expectations for potential applicants. The

of Open Call 2 for co-developing including the eligibility criteria, requirements, and timeline of the programme.

CORTEX² technical team presented eight topics addressing challenges, requirements, expected outcomes, deliverables, KPIs, and the technical support available for successful applicants.



3.3.2 Q&A Email support

Established in OC1, the Help Desk at opencall@cortex2.eu continued in OC2. The Help Desk was managed by F6S open call managers. Upon receiving a query, F6S was responsible for providing direct responses related to concrete administrative matters. For inquiries of a specialised nature connected to the technology employed or the specific topics, the query was directed to a technical expert from the technology development partners for a comprehensive response. Responses were provided within 1 to 3 working days. An average of 2 to 3 questions were received daily. As the Open Call deadline approached, the volume of questions intensified, with approximately 30 queries received in the final two weeks.

3.3.3 F6S public discussion board

As in OC1 a dedicated discussion board was open for applicants on the F6S page where the Open Call 2 was managed: https://www.f6s.com/cortex2-open-call-2-for-co-developers/discuss

The discussion board was monitored by a designated open call manager from F6S. Response process was following a similar structure as in the help desk scenario. Administrative questions were directly handled by F6S open call managers, while technology-oriented queries were redirected to specialist partners. Once a response was received by the partner, the responsible F6S manager published it on the board. Given the interactive nature of the discussion board, responses to queries were promptly provided within 24 hours of receiving the question.

3.3.4 F6S scouting activities

As in OC1, CORTEX² Open Call made use of the F6S scouting services pertinent to the core business of the company. Specialised scouting process was applied where based on the profile of entities sought to apply for the call, the F6S scouting team performed a thorough search divided in three stages. Under stage 1 a mass mailing was sent to companies with a suitable profile - e.g. XR, AR, VR related specialists and founders. Potential applicants were pinned down out of the 5 000 000 members currently active in the platform. In the second stage, open calls

with similar profiles were identified, and information about the opportunity reached suitable applicants. The final step involved a more targeted approach, where 30 companies matching the sought profile were directly approached and informed about the opportunity.

3.4 OC2 status - number of submitted applications

The Open Call 2 attracted 149 started applications, among which 91 were submitted. It means that in total OC1 and OC2 exceeded the KPIs of number of submitted applications 237 (original KPIs 200).

Regarding the distribution of the Topics within OC2, all were successfully addressed by the applicants (Open Topic and Topic 3: Virtual Experiences Editor were the most popular among the applicants – 24 and 16 applications respectively) securing a wide diversity among the proposals (Fig 13).
In terms of number of applications submitted per country, OC2 attracted a variety of geographical locations with the following leaders (i) Italy (16 applications), France and Spain (11) and Germany (8) (Fig 14). 19 applications applied as a consortium with 2nd partner coming mostly from Italy, France, Turkey.

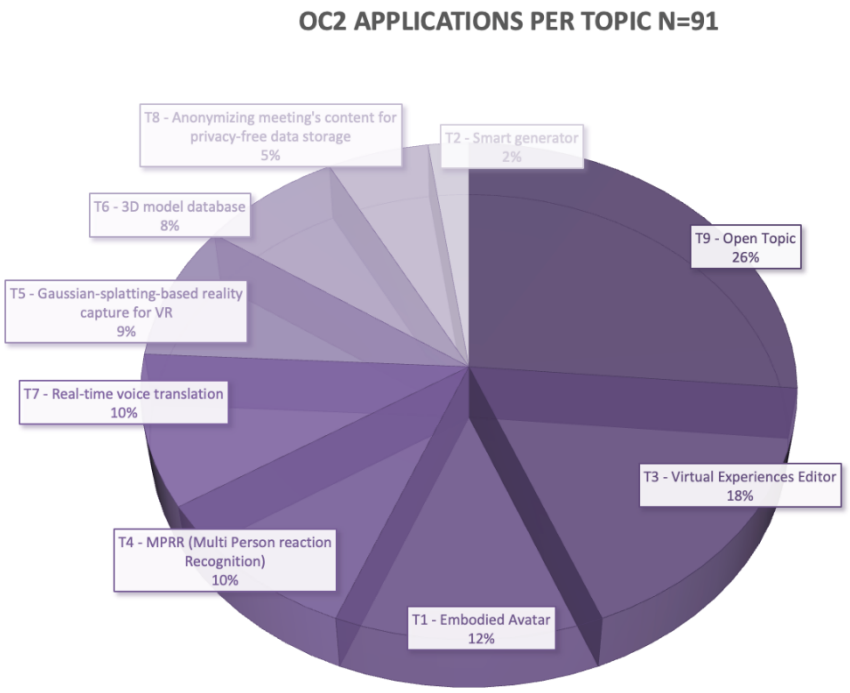


Figure 13- CORTEX² OC2 distribution per Topic among submitted applications, n=91

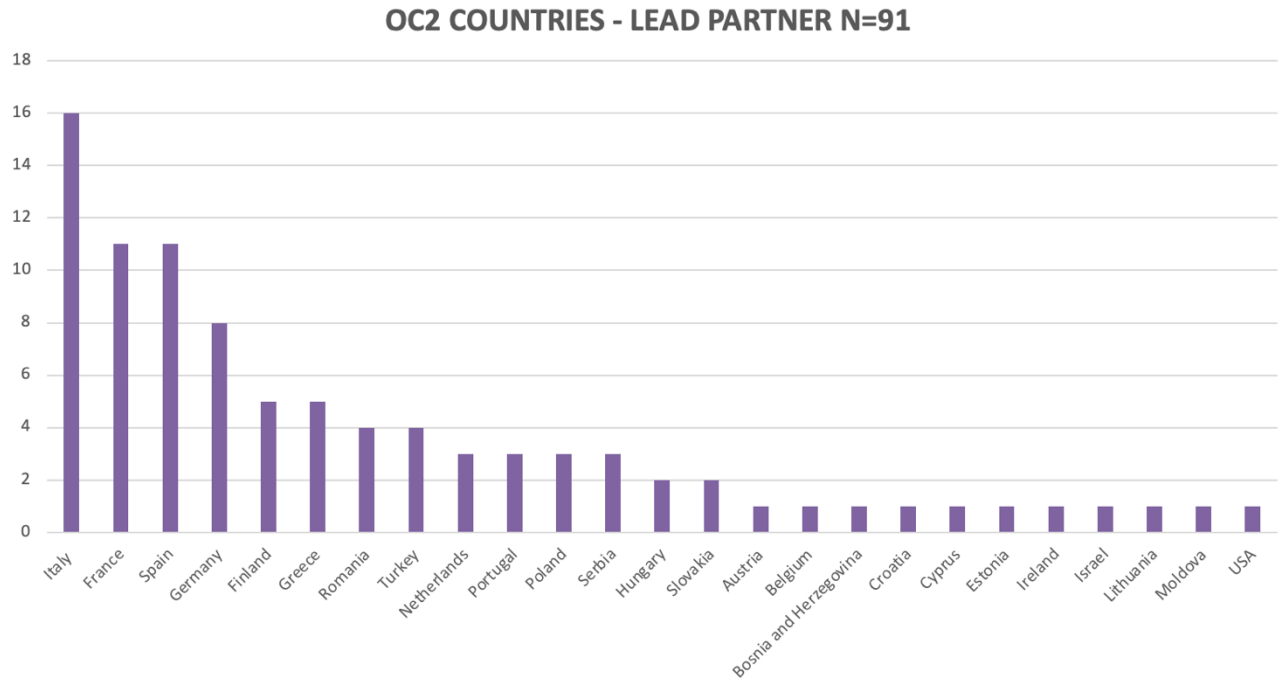


Figure 14- CORTEX² OC2 distribution of applications submitted per country – Lead partner (25 countries)

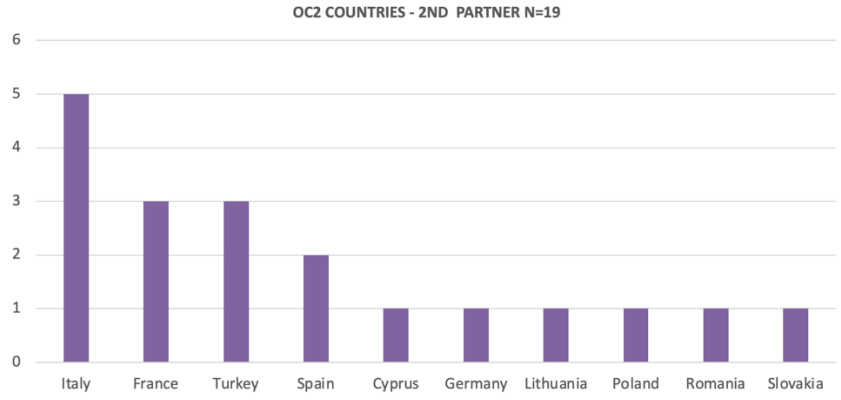


Figure 15- CORTEX² OC2 distribution of applications submitted per country - 2nd partner (10 countries)

3.5 OC2 next steps

The next deliverable will describe OC2 processes starting from the evaluation until onboarding to the 2nd Assistance Programme of CORTEX² (Fig 16). The programme details are defined in the Guidelines for Applicants for OC2. Similarly to OC1 it will cover technical, admin and on demand services (Fig 17). Since in OC1, F6S collects bi-monthly feedback from the 3rd parties about the programme and collaboration, as well as from mentors, there might be changes and/or improvements introduced in the process based on the expressed needs. It will be reported in the final deliverable.

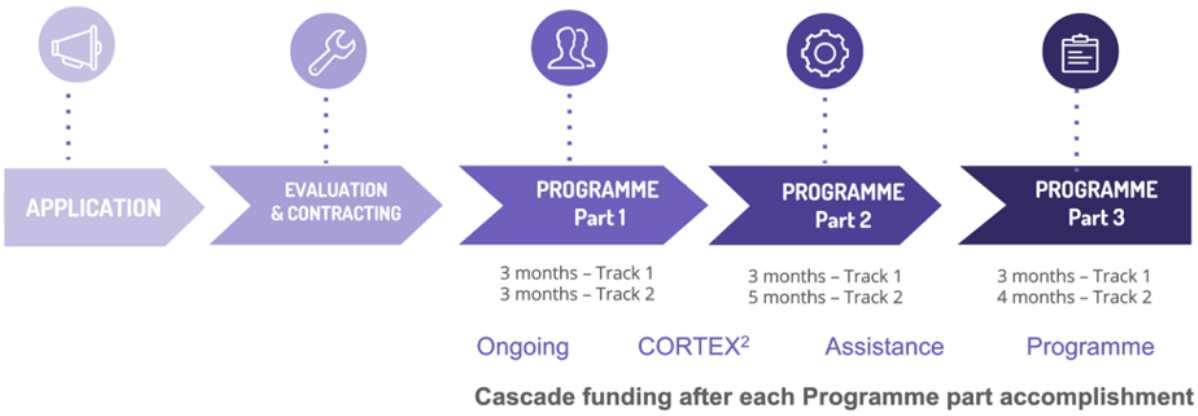


Figure 16- OC2 management plan

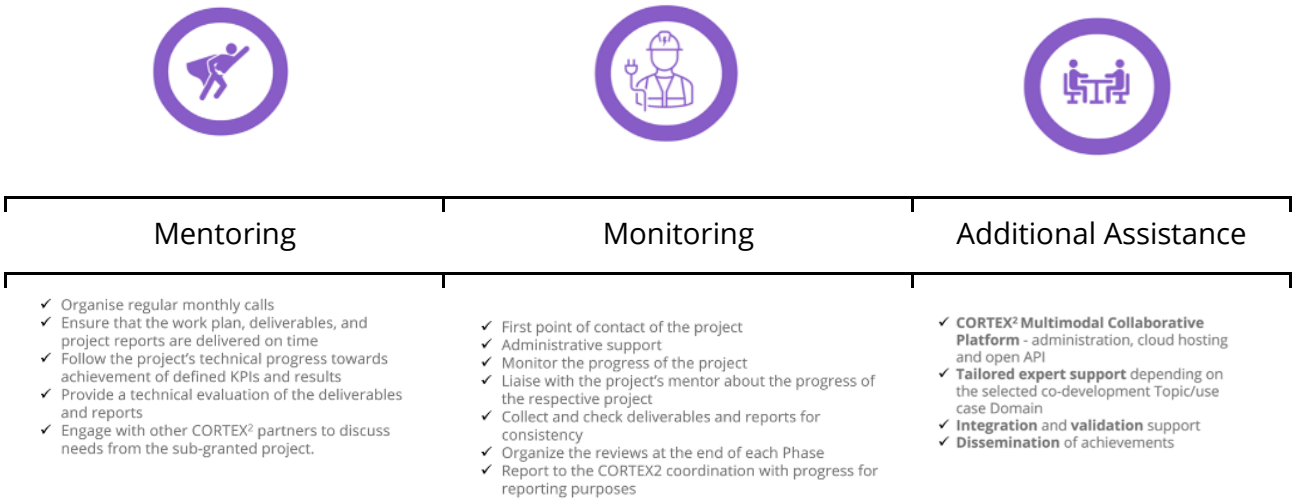


Figure 17- CORTEX² Assistance Programme

3.6 OC2 Recruitment of external evaluators

Alongside OC2, the project launched an Open Call for interest expression for the external evaluators: https://www.f6s.com/cortex2-oc2-external-evaluators published also on the project website https://cortex2.eu/open-calls/call-for-experts/

The applying evaluators were required to prove the following expertise in:

- VR, XR and AR based solutions:
- AI
- Teleconference and videoconference platforms
- UX design
- Industry 4.0
- Market uptake and business scalability

- Ethical, legal and social implications of XR-based tele cooperative work

In result 59 experts applied to the call. Similarly, as in OC1 Expression of interest, the evaluation of the expert's match was performed by two CORTEX^2 technical experts including the Project Coordinator. Accordingly, each evaluator was scored on a scale 1-4 per OC2 topic (Fig 18).

- 1 - top match
- 2 - good match
- 3 - reserve
- 4 - no expertise

Based on the assessment 14 evaluators were selected and 9 reserved. The contracting process scheduled for September and final updates on this task will be reported in the next deliverable

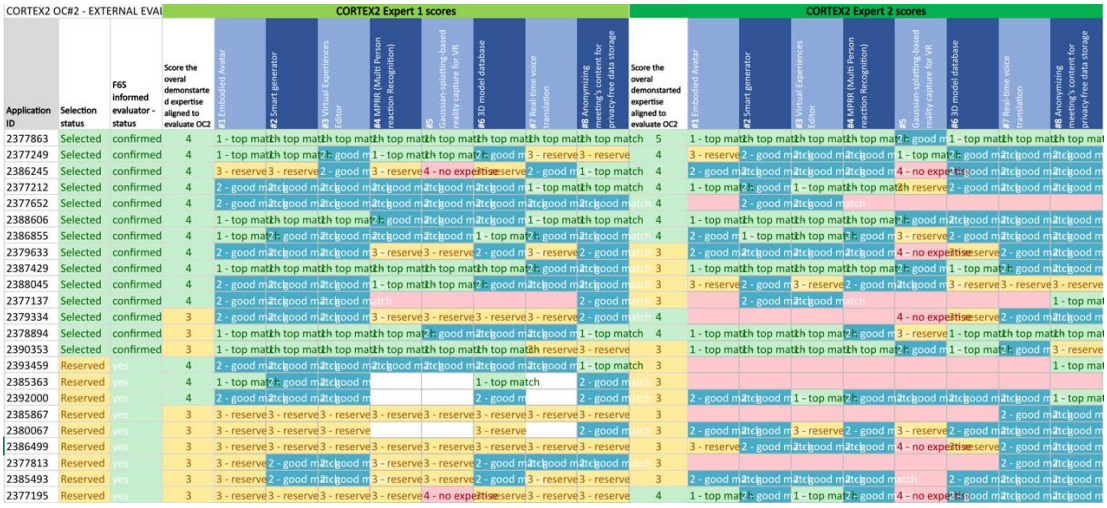


Figure 18- OC2 External experts' selection - expertise fit per Topic

4 Next steps & conclusion

Both Open Calls were successfully executed. The remaining tasks in brief include OC1 programme assistance continuation; finalising OC2 evaluation, selection, and onboarding, and kicking off OC2 programme.

Further efforts will be fully dedicated to monitor and mentor the 3rd parties for the highest outcomes for the CORTEX^2 ecosystem. The project is planning to connect all the 3rd parties (30 projects in total) to enhance synergy channels and testing and validation opportunities. In addition, there will be 6 workshops organised for the 3rd parties, based on the needs expressed in the regular feedback collection.

ANNEXES

- Annex 1 Guidelines for Applicants
- Annex 1.1 Technical Description
- Annex 2 Application Form
- Annex 2.1 Proposal Template for co-development
- Annex 3 Declaration of Honour
- Annex 4 SME Declaration
- Annex 5 Sub-grant Agreement
- Annex 6 Bank Account Information

CORTEX²

ANNEX 1 Guidelines for Applicants

Open Call #2

Submission deadline: **August 15, 2024, 17:00 CET**

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1. INTRODUCTION

This document provides a full set of information regarding **CORTEX² 2nd Open Call for Proposals**, also referred to as **Open Call #2**.

All associated Annexes must be additionally read for the submission of a Proposal.

1.1 Context

The COVID-19 pandemic pushed individuals and companies worldwide to work primarily from home or change their work model to stay in business. Today, all the signs are that remote work is here to stay. But not all organizations are ready to adapt to this new reality, where team collaboration is vital.

Existing services and applications aimed at facilitating remote team collaboration — from video conferencing systems to project management platforms — are not yet ready to efficiently and effectively support all types of activities. Extended reality (XR)-based tools, which can enhance remote collaboration and communication, present significant challenges for most businesses.

1.2 CORTEX² project

The CORTEX² project stands for **COoperative Real-Time experiences with EXtended reality**. It is funded by the European Union's Horizon Europe research and innovation programme under grant agreement N° 101070192.

CORTEX² is developing a highly innovative and digital XR teleconference platform specifically geared to facilitate work and social activities involving physical interaction with the environment and remote objects — from remote assistance or training to working in collaborative spaces.

The project will democratise the integration of XR hardware and software into daily industrial processes for all types of operators, enabling next-generation tele-cooperation mechanisms that will accelerate the future of work and validate the scalability potential through competitive calls.

1.2.1 Team

The CORTEX² consortium is formed by 10 organizations in 7 countries, which work together for 36 months.

Table 1 - CORTEX² Consortium: list of partners.

Company name	Abbreviation	Country
Actimage GmbH	ACT	Germany
ALE International	ALE	France

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Commissariat A L Energie Atomique ET AUX Energies Alternatives	CEA	France
Deutsches Forschungszentrum fur Kunstliche Intelligenz Gmbh	DFKI	Germany
F6S Network Ireland Limited	F6S	Ireland
Intracom Sa Telecom Solutions	ICOM	Greece
Katholieke Universiteit Leuven	KUL	Belgium
Linagora Grand Sud Ouest SA	LINA	France
MTU Australo Alpha Lab	AUS	Estonia
Universitat Jaume I De Castellon	UJI	Spain

- **Two academia and research organisations** (DFKI, CEA) with outstanding scientific and technological expertise, required to deliver high-quality concepts, technologies, methods and algorithms.
- **Two academia (UJI, KUL) from the social sciences and humanities** that will contribute to making sure of the usability and exploitability of results with regard to EU legislation and values.
- **Four technical ICT providers** (ALE, LINA, ICOM, ACT) offering strong technical knowledge as well as an open-source business model and intention to exploit CORTEX^2 results.
- **Two SMEs with successful experience in ICT startup innovation business** (F6S, AUS), necessary to the success of the FSTP mechanism as well as the broad dissemination and exploitation of the CORTEX² results.

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Figure 1 - CORTEX² Consortium.

1.2.2 Ambition

The mission of CORTEX² is to democratize access to the remote collaboration offered by next-generation XR experiences across a wide range of industries and SMEs.

To this aim, CORTEX² will provide the following:

- Full support for **augmented reality (AR) experiences** as an extension of video conferencing systems when using heterogeneous service end devices through a novel Mediation Gateway platform.
- Resource-efficient **teleconferencing tools** through innovative transmission methods and automatic summarization of shared long documents.
- Easy-to-use and powerful **extended reality (XR) experiences** with instant 3D reconstruction of environments and objects, and simplified use of natural gestures in collaborative meetings.
- Fusion of vision and audio for **multichannel semantic interpretation,** and enhanced tools such as **virtual conversational agents** and **automatic meeting summarization**.
- Full **integration of Internet of Things (IoT) devices into XR experiences** to optimize interaction with running systems and processes.
- **Optimal extension possibilities and broad adoption** by delivering the core system with **open APIs** and launching **open calls** to enable further technical extensions, more comprehensive use cases, and deeper evaluation and assessment.

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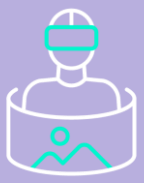
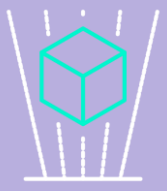
		
Easy-to-use and powerful XR experiences with instant 3D reconstruction of environments and objects, and simplified use of natural gestures in collaborative meetings	**Full integration of internet of things (IoT) devices into XR experiences** to optimise interaction with running systems and processes	**Full support for augmented reality (AR) experiences as an extension of video conferencing systems** when using heterogeneous service end devices through a novel Mediation Gateway platform
		
Resource-efficient teleconferencing tools through innovative transmission methods and automatic summarization of shared long documents	Fusion of vision and audio for **multichannel semantic interpretation** and enhanced tools such as **virtual conversational agents** and **automatic meeting summarization**	**Optimal extension possibilities and broad adoption** by delivering the core system with **open APIs** and launching **open calls** to enable further technical extensions, more comprehensive use cases, and deeper evaluation and assessment

Figure 2 - CORTEX² innovations.

1.2.3 Specific objectives

- **Development of an open digital workplace for generic XR experiences**. The goal is to develop an open, versatile, inclusive and scalable digital workplace — thus addressing

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the challenges of the current limitation of technologies to support a large number of simultaneous users, joining with possibly heterogeneous devices.

- **Reduced environmental footprint of tele-cooperation.** The use of videoconferencing systems has a significant environmental footprint. For example, one hour of streaming or videoconferencing can emit between 150 and 1,000 grams of carbon dioxide, depending on the service used. During online calls, many documents are shared, often just to convey the general idea of their content. Another of the project's innovations will be to automatically summarise long documents before sharing them and send the full version only on demand.

- **Natural, flexible and plug-and-play XR collaborative experiences.** Extended Reality experiences should be easy to use even for occasional users without strong technical background. Our objective is to simplify the use of AR by including several technical modules in our framework:

    a. Instantaneous 3D modelling

    b. Natural gestures recognition and interpretation

    c. Semantic matching of surrounding spaces

- **Semantic visual/audio fusion for enhanced functionalities.** High-level semantic understanding of visual situations and audio conversations will be beneficial to the users of remote tele-cooperation tools since it allows for the development of additional services such as automatic meeting summary, visual AR support for spoken conversation and alignment of semantic spaces.

- **Integration of IoT information for immersive video conferencing experience.** The objective is to create more immersive experiences for participants of videoconferences, by integrating rich contextual IoT information to video streams, rendered as AR annotations on top of displayed objects and persons.

- **Ethical, legal and social implications of XR-based tele cooperative work.** CORTEX² will create a novel technology to facilitate remote collaborative work, which raises ethical, legal and social challenges.

1.2.4 Pilots

The project will implement three different use cases as pilots to test the integration of all the components of the CORTEX² framework.

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1.2.4.1 Pilot 1 – Industrial Remote Cooperation

The pilot will demonstrate that an XR immersive experience can be reached with heterogeneous and off-the-shelf mobile devices and with limited bandwidth conditions while improving productivity and reducing environmental footprint.

It will highlight the implementation of these services:

- Augmentation of the real environment with virtual assets in an industrial context
- Gesture analysis and scene semantics analysis to inject annotations in video streams.
- Audio transcription and voice command to control the immersive environment and document and record the intervention.
- Support and mixing of multiple videos and IoT data sources from non-immersive devices to compose an on-demand immersive collaboration space with augmented data such as industrial data, gesture interpretation, and 3D image insertion, that will meet the front-line technician and expert needs depending on their devices involved.
- Optimization of network bandwidth usage through video and metadata stream orchestration as well as rendering distribution.

1.2.4.2 Pilot 2 – Remote Technical Training

The pilot will demonstrate that VR/AR allow for efficient knowledge transmission in one-to-many situations where the remote instructor can simultaneously help several trainees while referring to physical objects such as industrial equipment.

This pilot will explore the use case of a trainer of a technical learning session being assisted to allow him to deliver remotely a learning session using VR and showing manipulation of a machine to trainees. The immersive collaboration space will enable trainees and trainers to interact in real-time not only between them but also with the machine model.

The use case is based on the training of qualified staff in complex and technical tasks on large and complex machines. The virtualization aspect should allow both face-to-face and remote training.

The main objectives of this training aim at

- The comprehension of the main components of the machine.
- The correct operation of the vehicle in a safe way, linked with its surrounding environment.
- The improvement of the efficiency while using the machine, improvement of the skills and the tuning of the settings.

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- The use of the virtual world allows for the simulation of dangerous situations, the collaborative aspect shall allow also to illustrate misuse scenarios of the machine.

1.2.4.3 Pilot 3 – Business meetings

The pilot will demonstrate that VR/MR enriched business meetings allow seamless integration of remote participants and improve productivity.

This pilot will allow us to develop an innovative business meeting support system, integrating several functionalities to improve and enrich the participants' experience. Such a tool will facilitate the integration of remote participants using VR and AR techniques on the one hand, to provide remote users with a perception of visual and auditory immersion close to real presence; on the other hand, to offer a representation of the remote person to the other participants of the meeting.

The following advanced VR features will be made available to reinforce user inclusion:

- Visual and audio immersion of the remote user.
- Modalities such as overlay display for the visualisation of information concerning both the collaboration's participants (name, function, profiles, etc.) and the interaction: subtitle, main topics discussed, recommendation of actions and any other information.
- Filmed or avatar representation of the remote user, with symbolic transcription of the non-verbal communication acts of the remote person who is provided with a panel of predefined actions that are automatically recognized: request to speak, participation in a vote, expression of agreement or disagreement, etc.
- Virtual representation of collaborative tools and artefacts such as board, projection screen and documents.
- Advance added value services will be provided, such as meeting transcription and automatic subtitling as well as document summarization and automatic minutes generation.

2. CALL FOR PROPOSALS

2.1 Objectives

In the 2nd Open Call, CORTEX² will **invest a total of €1.000.000**, which will be aimed at recruiting tech start-ups/SMEs and/or research organisations to co-develop CORTEX² platform.

The objective is to deliver an inclusive XR teleconference platform while involving organisations in the 'Lab-To-Market' stage that will bring new modules and features, enhancing the functionalities and opportunities CORTEX² can provide.

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2.2 Open Call #2 design

Open Call #2 **Co-development** aims to recruit tech Startups, SMEs and/or research organisations to participate in the co-development of CORTEX² with the goal to build value-added services based on the CORTEX² framework leveraging their expertise on specific market segments.

Figure 3 - CORTEX² Open Call 2 design.

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Table 2 - Open Call 2 characteristics.

Type of application	Target and goal	Expected outcome	# funded projects	Who can apply
Co-development	For tech Startups/SMEs and/or research organisations to participate in the co-development of CORTEX²: (1) addressing the topics defined by the CORTEX² team, or (2) open topic submitted by the applicant within the scope of the CORTEX² objectives.	Build value-added services based on the CORTEX² framework leveraging third parties' expertise on specific market segments.	10	**Single or max 2 entities** Startups/SMEs Research organisations Acting as Tech developer(s)/provider(s)

CORTEX² Open Call 2 "Co-development" will provide a maximum of 100 000 EUR per project to fund the development, integration and validation of highly innovative XR, AR technologies. They will contribute to CORTEX² digital XR platform specifically geared to facilitate work and social activities involving physical interaction with the environment and remote objects — from remote assistance or training to working in collaborative spaces.

The selected 3rd parties will be co-building an interdisciplinary community with expertise from the areas of XR, AR, users' providers of videoconferencing, AI, psychology and ethics with the mission of building next-generation extended reality tele-cooperation solutions.

FOR WHO?

This Open Call will finance at minimum one single entity (tech Startup/SME/research organisation) and maximum of two entities representing Technology Developer(s): with emphasis on the XR, AR, AI. The inclusion of the 2nd entity must be justified.

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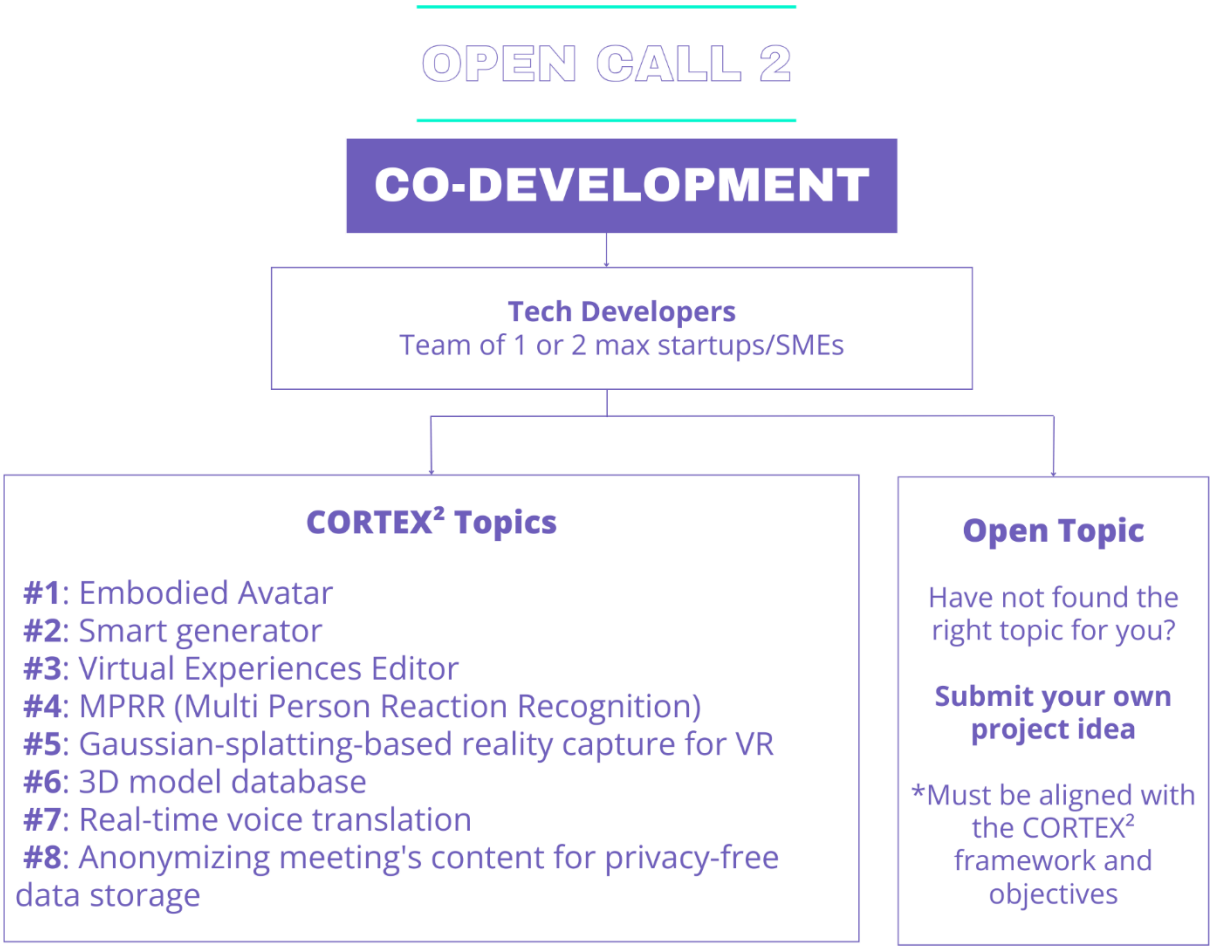

Figure 4 - CORTEX² Co-development design

The expected **result will be 10 innovative projects** which will be run by the selected entities, co-developing and demonstrating the value of CORTEX^2 technologies.

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Table 3 - Co-development programme.

Track 1: CO-DEVELOPMENT				
Sprint name	**Duration (months)**	**Activity**	**Means of verification**	**Funding [3] % of the project budget**
SPRINT 1	3	Development	- Design and integration plan - Deliverables required per selected Topic [1] - KPIs defined per selected Topic [2]	40%
SPRINT 2	3	Integration	- Minimum demo - List of deliverables per selected Topic [1] - Listed KPIs [2]	35%
SPRINT 3	3	Validation	- Final product and test results - List of deliverables per selected Topic [1] - Listed KPIs [2]	25%

1) The list of deliverables required per selected Topic is available in each Topic description. In the case of the application for **Open Topic**, the applicant must define 3 deliverables, 1 per each sprint.

2) The list of KPIs required per selected Topic is available in each Topic description. In the case of the application for **Open Topic**, the applicant must define a minimum of 3 KPIs, 1 per sprint.

3) Associated with a positive assessment of the required deliverable(s) and KPIs.

List of available Topics for Open Call #2 Co-development

Please choose one of the available **Topics** to apply to the Open Call.

If no fit is found, an applicant can apply to the **Open Topic**, submitting a proposal of work aligned with the Open Call objectives and the 9-month programme distribution. Such applicant must propose their own set of deliverables and KPIs (Table 3).

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Table 4 - Co-development Requirements: ethics, security and data management.

Co-development Track Requirements	
Ethics	1. All Artificial Intelligence software or techniques co-developed in the course of CORTEX^2 must be compliant with the Assessment checklist for trustworthy AI as proposed by the High-level expert group on AI (AI HLEG). The complete document can be retrieved from the website of the European Commission to conduct a self-assessment. Hence, the applicants must conduct a self-assessment to ensure that the proposed solution adheres to the ethical requirements in the assessment list, namely. i. Human Agency and oversight ii. Technical robustness and safety iii. Privacy and data protection iv. Transparency v. Diversity, non-discrimination and fairness vi. Societal and environmental well-being vii. Accountability 2. In addition, the applicant must assess the possibility and disclose whether their proposed solutions, software or the techniques have dual use (military application) or are capable of being misused (illegal or unethical purposes or used to violate human rights or compromise the safety of humans, animals or the environment). To this end, the applicant must disclose the capabilities of all co-developed components or software.
Security	The applicant must implement the appropriate privacy-preserving techniques, safeguards, security, measures and mechanisms to ensure the protection of personal data concerning the development, deployment and use phases of the co-developed software components. The applicant must disclose the possible and known risks and vulnerabilities concerning cybersecurity of the co-developed software or components.
Data management	The applicant must outline how data would be collected, generated and/or processed with details of the type of data/metadata they intend to use and the origin of such data, the quality assurance of such data. Details on how the applicant intends to comply with the FAIR data principles (Findable, Accessible, Interoperable, Reusable) must be provided along with storage, security, and re-use plans for such data.

Table 5 - Topic#1 Embodied avatar animation

Topic#1 Embodied avatar animation	
Challenge	Development of application to support the animation of embodied avatar representing the user in 2D or 3D scene either in VR or in augmented reality mode. The purpose is to be able to reproduce some user body and/or face

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<table>
<tr><td></td><td colspan="3">animation. Hence the proposals may tackle several or all the features described below:
- Library of predefined body movement for avatar animation in VR environment
- Face animation of avatar or picture based on sound, voice (lips animation), gaze tracking (eyes) or emotion detection
- Interface and authoring tool for user to train avatars to learn specific body movements and save these movements into a shared library for specific use</td></tr>
<tr><td>Co-development area</td><td colspan="3">Avatar generation</td></tr>
<tr><td rowspan="5">Requirements</td><td>TRL at the end of the project</td><td colspan="2">Reach TRL7</td></tr>
<tr><td>Source code availability</td><td colspan="2">Open source is preferred (but not mandatory)</td></tr>
<tr><td>Standards</td><td colspan="2">Avatar and animation standards format (GLB, VRM, Collada, SVG, and OBJ, etc.)</td></tr>
<tr><td>Programming language</td><td colspan="2">C# or JS suggested</td></tr>
<tr><td>Other(s)</td><td colspan="2">The generated avatars should be Unity3D and webXR-compatible.</td></tr>
<tr><td>Ideal candidate</td><td colspan="3">SME (gaming) or academia subject-matter expert in avatar animation</td></tr>
<tr><td>Minimum deliverables required (M-month D-deliverable)</td><td>1st Sprint (M3)</td><td>2nd Sprint (M6)</td><td>3rd Sprint (M9)</td></tr>
<tr><td></td><td>D1. Specification & test plan</td><td>D2. POC (integration in one pilot) +video</td><td>D3. MVP and product video
D4. End user testing on plausibility of the avatar behaviour and user-study to verify the quality</td></tr>
<tr><td>KPIs</td><td colspan="3">At the end of the project:
<u>Avatar animation</u>:
● Male and female avatar animation,
● library of movements & number of animations min 4 : walking / seating up and down / raise hand / yes, no, acknowledge,
● Emotions: 3 emotions e.g. happy, agree/disagree, upset
● Sound based animation: Cough, sneezing, Yawning
● <u>Lipsync:</u>
● Operational Efficiency: this method should work in real time and with low computation resource
● User-preferability: in terms of quality, the user should be satisfied with the output result.
● User Diversity and Inclusion: The generalization of the proposed model should be high enough to support all type of voice tones including men, women and also children.</td></tr>
</table>

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Resources provided by CORTEX²	• Documentation of CORTEX² framework • An assigned contact person from CORTEX2 consortium • Integration support
Expected final outcome	Full integration of the avatar animation capabilities within one of the 3 Cortex2 pilots.

Table 6 Topic #2 Smart generator

Topic# 2 Smart generator		

Challenge	Real Time AI asset and 3D materials generator empowered by Generative AI.
	2 possible approaches:
	• It is about creating a framework: Given a Textured 3D mesh of an object generated from multi-view images (using NERFs or SfM methods) the framework should perform either of the two functions:
	  ○ 1) The framework should enhance the texture quality of the mesh. (See. RTX Remix)
	  ○ 2) The framework could change the texture details of the mesh using a given textual prompt. (E.g. if a red bottle with blue cap is 3D scanned and the text prompt is "change the red bottle to green bottle", the framework should be able to make the red bottle into green bottle with blue cap.
	• It is interesting to have the capability of Generating assets in real time with AI in Unity Project. It will be useful on the Cortex² collaborative platform regarding pedagogy, inclusion, and accessibility. PC and VR Users will be able to point out objects, personalize scenes and change colours or objects (furniture, clothes, etc.) in case of sickness like colour blindness or uncomfortable feelings with appearances of objects/subjects (phobia or embarrassment) while they are interacting with each other.
	We are targeting a tool to extract a 3D object from scan and augment it thanks to Generative AI to increase the fidelity of scanned objects.
	We want to provide customisable mods to existing assets, like coffee cups, water bottles or other components of the scene that could also extend to adding a logo to a shirt.	

Co-development area	VR interaction	
Requirements	TRL at the end of the project	TRL 7
	Source code availability	Project sample source code integrating its capability in Unity3D

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	Standards	Open source is preferred (but not mandatory) - standards format for 3D objects	
	Programming language	Open standards – C# for Unity or JS for WebXR	
	Other(s)	- Materials and assets should be Unity-compatible considering AI ethics and uses (if censorship is needed) - {Disarmed} generated 3D Objects: no hidden tags or links - No IPR on generated 3D models	
Ideal candidate	SME or academic matter expert on Generative AI for 3D images		
Minimum deliverables required (M-month D-deliverable)	**1st Sprint (M3)**	**2nd Sprint (M6)**	**3rd Sprint (M9)**
	D1. Specifications & test plan Asset generation regardless of time, regardless of medium	D2. POC (integration in one pilot) +video Validation and tests with Unity on PC at least	D3. MVP and product video Optimization Unity, dll compatibility with PC + android, low resource generation End-user testing regarding quality of the generated results
KPIs	At the end of the project: • Fast generation, low resource consumption, high fidelity photo realistic rendering • Increase the quality or add customisation to one mesh model • Increase the quality or add customisation to many mesh models; the number of mesh models should not be limited (i.e., the framework should be generalisable to any mesh models) • The framework should generate the modified texture + mesh in less than 10 seconds. • The modified mesh model should be able to render at real-time speeds in web-browsers and mobile phones. (the size of the model should also be reasonable for mobile data downloads) • work on generated 3D mesh generated dark environment		
Resources provided by CORTEX²	• Documentation of CORTEX² framework • An assigned contact person from CORTEX² consortium • Integration support		
Expected final outcome	• Improve the results of the 3D scene reconstruction • Have the capability to modify in real time objects in the scene by using textual description. • integration of the avatar animation capabilities within one of the 3 CORTEX2 pilots. The eLearning scenario may be the first one to consider.		

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Table 7 – T#3 Virtual experiences editor

Topic #3 Virtual experiences editor			
Challenge	The objective of this topic is to provide end-customers with an easy-to-use creation environment for their industrial or commercial VR/Web 3D applications. Integrating CORTEX2 services in such editing tools will help end-customers easily integrate CORTEX2 capabilities into their use cases. The objective for the editing platform responding to this topic is to integrate CORTEX2 services to make them easily accessible to their customers within their editing interface. The end customers can then create their own customized virtual environments by dragging–and–dropping CORTEX2 services of their selection. All CORTEX2 services could be integrated, for example: Audio/Video collaboration, IoT data and control, Avatarization, AI assistants, hands & gestures, translation, meeting summary, etc... Not all CORTEX2 services should be integrated but a minimum of 5 services offered by CORTEX2 should be integrated in the editor for end-customers to access (using APIs/SDKs from the CORTEX2 platform), with a minimal integration of collaboration and IoT data and actions services.		
Co-development area	VR Interaction		
Requirements	TRL at the end of the project	6	
	Source code availability	Not mandatory.	
	Standards	No specific standards.	
	Programming language	Best usage of CORTEX2 APIs and SDKs.	
	Other(s)	Bi-directional devices and humans' communication between the real and virtual world	
Ideal candidate	• Web3D experiences editing platform • Industrial VR software editors		
Minimum deliverables required (M-month D-deliverable)	**1st Sprint (M3**	**2nd Sprint (M6)**	**3rd Sprint (M9)**
	D1. Specification & test plan	D2. User documentation & Demo video	D3. MVP & end-user testing evaluation
KPIs	• Number of CORTEX2 services integrated in the editor (target 5) • Number of different browsers and/or VR headsets supported (target 3) • Number of environments created and ease of creation (target 5) • Mandatory Integration of Collaboration and IoT services Target 5)		

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Resources provided by CORTEX^2	• Documentation of CORTEX^2 framework • An assigned contact person from CORTEX2 consortium • Integration support
Expected final outcome	Improve accessibility to CORTEX2 services by allowing end-customers to create their own VR/Web3D environment integrating CORTEX2 services in a low code/no code manner.

Table 8 – T#4 Multi-Person Gesture Recognition (MPRR)

Topic#4 MPRR (Multi-Person Reaction Recognition)			
Challenge	Given a monocular video from a webcam and user type [host, participant] the following features must be available in rainbow. • Host: Given the webcam video containing a single person, the system should detect the static gestures (mute all participants, thumbs up, thumbs down, question, clap) and dynamic gestures (swipe left/right/up/down, track index finger as a virtual pointer) performed by the person. • Participant: Given the webcam video containing multiple people, the system should detect static gestures (thumbs up, thumbs down, question, clap) performed by each person in the webcam video. The entire solution should run in real-time and on the client's device.		
Co-development area	Gesture Analysis		
Requirements	TRL at the end of the project	TRL 7-8	
	Source code availability	The third-party solution could be either open-source or developed in-house by the SME.	
	Standards	N/A	
	Programming language	Python, JS, TS, C#, C/C++, Go	
	Security	N/A	
	Data management	N/A	
	Other(s)	Developers may consider using mediapipe framework. The models should run on CPU. On each sprint, a development documentation is required,	
Ideal candidate	Frontend Engineer, Frontend Engineer, Machine Learning Engineer		
Minimum deliverables required (M-month	**1st Sprint (M3)**	**2nd Sprint (M6)**	**3rd Sprint (M9)**
	D1. Standalone prototype/proof of concept	D2. Integration into CORTEX2 framework	D3. Optimization and real-time setup.

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D-deliverable)			
KPIs	• Implementation of 5 static and 5 dynamic gestures • Support for at least 10 participants at any instance • Bandwidth consumption of less than 50Mb		
Resources provided by CORTEX^2	• Documentation of CORTEX^2 framework • An assigned contact person from CORTEX^2 consortium • Integration support		
Expected final outcome	A multi-person hand gesture recognition module for video conferencing which can be used by the host and the participants.		

Table 9 T# 5 Gaussian-splatting-based reality capture for VR

Topic# 5 Gaussian-splatting-based reality capture for VR		
Challenge	The cutting-edge technique of 3D Gaussian Splatting offers a novel approach to real-time rendering and 3D reconstruction. This method involves explicit spatial expression that can achieve rendering at 60 FPS without the loss of integrity and precision commonly associated with mesh grids. Known challenges are large file sizes (ranging from 200MB to 1GB) which can hinder transmission and the effective rasterization in VR environments using Unity. The goal of this topic is to address two primary challenges: • Optimizing 3D Gaussian Splatting points to reduce memory needed for data transmission. • Visualization and deployment in Unity for VR headsets. We aim to leverage this technology to expand the possibilities for real-time rendering and 3D reconstruction.	
Co-development area	VR Interaction	
Requirements	TRL at the end of the project	TRL 6-7
	Source code availability	The third-party solution could be either open-source or proprietary.
	Standards	N/A
	Programming language	Python, C++, C#
	Ethics	The reconstructed scene used for the demo should meet the relevant confidentiality guidelines and not involve human figures
	Security	N/A
	Data management	N/A
	Other(s)	Developers can use existing 3D Gaussian Splatting technology and Unity-based deployment solutions to implement this feature in CORTEX2 framework. On

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		each sprint, a development documentation is required,	
Ideal candidate	Knowledge in: 3D reconstruction, Unity Development, Computer Graphics		
Minimum deliverables required (M-month D-deliverable)	**1st Sprint (M3)**	**2nd Sprint (M6)**	**3rd Sprint (M9)**
	D1. Local Prototype of Gaussian splatting visualization.	D2. Integration into CORTEX2 framework on VR.	D3. Optimized version with a demo scenario.
KPIs	• Types of visualization devices supported: Desktop or phone (via Web), VR headset • Rendering speed > 30 FPS • The size of 3D Gaussian point cloud file < 50 MB		
Resources provided by CORTEX2	• Documentation of CORTEX2 framework • An assigned contact person from CORTEX2 consortium • Integration support		
Expected final outcome	Supports 3DGS-based rendering for multiple devices in the framework of CORTEX2.		

Table 10 T#6 3D model database

Topic #6 3D model database		
Challenge	Develop a 3D model database system that allows for secure upload and download of 3D models. Multiple formats should be supported. Additional information, such as tags or preview images should also be supported. A clear API or easy-to-use library to retrieve data should exist.	
Co-development area	Scene semantics, modules and services	
Requirements	TRL	TRL 6-8
	Source code availability	N/A
	Standards	N/A
	Programming language	C++, C#, Python
	Ethics	N/A
	Security	N/A
	Data Management	N/A
	Other(s)	For additional processing, such as conversion, not all format features need to be fully supported, e.g. spline types of the .obj file or all possible material configurations. The limitations should be made clear.

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Ideal candidate	Experience with database services. Basic experience with 3D file formats and issues with them.		
Minimum deliverables required (M-month D-deliverable)	**1st Sprint (M3)**	**2nd Sprint (M6)**	**3rd Sprint (M9)**
	D1. Proof of concept/standalone solution	D2. Integration into Cortex2 Framework	D3. Full integration documentation and support for XR headsets.
KPIs	• Processing time of new models (Including conversions, preview generation, meta data, etc.). Less than 5-10 minutes, depending on the model complexity • Number of formats supported (minimum 3-4 formats. Required: .obj, .gltf/.glb. Other formats could be .ply, .fbx, ...) • Handling of simultaneous requests (at least 15 users)		
Resources provided by CORTEX²	• Documentation of CORTEX² framework • An assigned contact person from CORTEX² consortium • Integration support		
Expected final outcome	A 3D model database system		

Table 11 T#7 Real-time voice translation

Topic#7 Real-time voice translation		
Challenge	The challenge in language translation in virtual collaboration context is to be able to preserve the meaning and order of actions to avoid misinterpretation. This is particularly evident in the case of remote assistance or learning via extended reality, where the actions and their order of execution to repair a machine are important. It's not just a case of spontaneous translation, where no damage can occur. The second difficulty is to find the best real-time balance between speech translation and its transformation to text to be presented or played using a synthesized voice.	
Co-development area	Audio transcription	
Requirements	TRL (*)	TRL7
	Source code availability	Open-source models, some of them provided by hugging-face community
	Standards	Inference API
	Programming language	N/A
	Data management	N/A
	Other(s)	• Requirements are utilizing language models for translation and speech processing techniques.

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		• It can be done by obtaining a text out of speech then translation after that again the inverse process. or the more elegant version to doing on the fly without converting to text. • There would be three most important technical challenges: 1- Providing a low latency (close to real-time) 2- Accurate translation 3- Proper replication of presenter speech tone for the output • IPR - Open source
Ideal candidate	Having experience in Language models and Speech processing	
Minimum deliverables required (M-month D-deliverable)	**1st Sprint (M3)**	**2nd Sprint (M6)** / **3rd Sprint (M9)**
	D1. Translation service functioning design and Proof of concept	D2. Translation service deployment and assessment / D3. Integration within CORTEX2 and validation
KPIs	Operational Efficiency: Real-time performance with low computation power (with as low latency as possible) User Satisfaction and Engagement: The quality of translation and reproduced speech Easy to be integrated to CORTEX2 framework and used by its internal pilots.	
Resources provided by CORTEX²	• Documentation of CORTEX² framework • An assigned contact person from CORTEX2 consortium • Integration support	
Expected final outcome	A working translation service with special attention to instructions in communication that explains how to handle or operate an object. French and German are the languages in input and English in output or vice versa.	

Table 12 T#8 Anonymizing meeting's content for privacy-free data storage

Topic#8 Anonymizing meeting's content for privacy-free data storage		
Challenge	Saving meetings data including participants' audio, note and other biometric information is not possible due to privacy issues. However, all these valuable information can be stored and used for different purposes such as data analysis in Psychology, Sociology, Economy, Marketing and etc. By anonymizing personal information, it is still possible to use all this valuable content which already consumed a lot of power and time resources.	
Co-development area	Smart Data	
Requirements	TRL (*)	TRL 6-7

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	Source code availability	The third-party solution could be either open-source or proprietary.
	Standards	GDPR
	Programming language	Python/C++
	Data management	The output should be compliant with GDPR
	Other(s)	Requires expertise in image, speech, and language processing. Visual biometric data, such as face images, must be either deleted or altered to be unrecognizable while preserving the rest of the content intact and usable. Similarly, audio and text data must be anonymized without affecting its usefulness for further analysis. On each sprint, a development documentation is required. An ethical / legal analysis should be conducted (possibly with help of the CORTEX2 consortium)
Ideal candidate	Having experience in biometric field.	
Minimum deliverables required (M-month D-deliverbale)	**1st Sprint (M3)**	**2nd Sprint (M6)**	**3rd Sprint (M9)**
	D1. Anonymization prototype for text, audio, image or video	D2. Integration to CORTEX2	D3. Demonstration with proof of anonymization
KPIs	- Generalization: Demonstration on at least 10 different unique sessions (with different persons) - Computational load: the solution should work on one standard GPU - At least two modalities should be considered in one session (e.g. audio, video)		
Resources provided by CORTEX^2	• Documentation of CORTEX^2 framework • An assigned contact person from CORTEX^2 consortium • Integration support		
Expected final outcome	Provide accurate content anonymization technology capable of efficiently handling various modalities (audio, image, video, text).		

3. Eligibility criteria

Applicants will have to abide by all general requirements described in this section to be considered eligible for CORTEX^2. The eligibility check verifies that:

- Submissions are made **ONLY** through the F6S platform in the space enabled for the CORTEX^2 Open Call #1 within the defined deadline.
- Applications should be submitted using the following address: https://www.f6s.com/cortex2-open-call-2-for-co-developers/apply

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- Applicants are legal entities established in an eligible Horizon Europe Country, as indicated in section **Eligible countries.**
- The Application as well as the requested documents are provided **ONLY** in English language.
- The Proposal description is submitted according to the Guidelines for Applicants and provided templates.
- A minimum of one and a maximum of 2 entities per submitted project are accepted.
- Not exceeding the maximum budget request per application.
- Complete application which includes the requested administrative data, and any obligatory supporting documents specified in the call.

A proposal is only considered eligible if its content corresponds specifically to the requirements of the Topics available of the CORTEX^2 Open Call #2, including the specific eligibility conditions set out in the relevant parts of the Guidelines for Applicants.

The applications that do not comply with those criteria will be excluded and marked as ineligible.

3.1 Confidentiality and deadline

Any information regarding the proposal will be treated in a strictly confidential manner. Only proposals submitted before the deadline will be accepted. After the call closure, no additions or changes to the received proposals will be considered.

Submission to the CORTEX^2 Open Call #2 is open between the **13th of June 2024, 00:00 CEST** (Brussels time) and the **15th of August 2024 at 17:00 CEST** (Brussels time). Proposals must be submitted before the deadline.

The deadline hour of submission is not flexible, as the online form will be automatically disabled at the day and hour defined as the deadline - Open Call#2 deadline: **15th August 2024 17:00 CEST (Brussels time).**

To avoid missing the deadline, the applicants are strongly encouraged to submit the proposal as soon as possible.

3.2 Type of Beneficiary (Applicant)

CORTEX^2 will fund third-party projects that may be from:

- a single entity or a team of 2 entities (acting as technology developers)

These entities are eligible under the following conditions:

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- An organization based in the EU or any Horizon Europe associated member state.
- An SME following the EU definition by the Commission Recommendation 2003/361/EC and in the SME user guide
- Secondary and higher education establishments, research institutes and other not-for-profit research entities like Foundations, Universities, Associations, NGOs, etc.

IMPORTANT: For-profit companies which are big enough NOT to be considered a SME are **NOT eligible** (ie: big corporates) to receive funding.

3.2.1 SME eligibility

Micro, small and medium-sized enterprises (SMEs) are considered eligible ONLY if complying with the European Commission Recommendation 2003/361/EC and the SME user guide. In summary, the criteria which define an SME are:

a. The headcount in the Annual Work Unit (AWU) is less than 250.

b. Annual turnover less or equal to €50 million OR annual balance sheet total less or equal to €43 million.

Startups that do not have yet annual turnover or balance sheets are also considered eligible given that they fulfil the criteria (a) and (b) at submission time.

In addition, the following conditions apply:

- The applying SMEs should not:
    - have convictions for fraudulent behaviour, other financial irregularities, or unethical or illegal business practices.
    - have been declared bankrupt or have initiated bankruptcy procedures.
    - Be under liquidation or an enterprise under difficulty accordingly to the Commission Regulation No 651/2014, art. 2.18
    - Be excluded from the possibility of obtaining EU funding under the provisions of both national and EU law, or by a decision of both national or EU authority
- Proposals must ensure that there is no risk of double funding. The fundamental principle underpinning the rules for public expenditure in the EU states that no costs for the same activity can be funded twice from the EU budget, as defined in Article 111 of Council Regulation (EC, Euratom) No 1605/2002 of 25 June 2002 on the Financial Regulation.

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3.3 Eligible countries

Entities legally established in any of the following countries (hereafter collectively identified as the "Eligible Countries") are eligible:

- The Member States (MS) of the European Union (EU), including their outermost regions.
- The Overseas Countries and Territories (OCT) linked to the Member States[1].
- Horizon Europe associated countries (Association to Horizon Europe is governed by the Horizon Europe Regulation 2021/695): according to the updated list published by the EC[2]

The UK applicants are not eligible under the conditions set by the EC for Horizon Europe participation at the time of the deadline of the call.

3.4 Proposal submission

Proposals must be submitted electronically, using the CORTEX[2] Online Submission Service accessible via the F6S platform at: https://www.f6s.com/cortex2-open-call-2-for-co-developers/apply

Proposals submitted by any other means will NOT be evaluated.

3.4.1 Multiple Submissions

This call is competitive. Multiple applications are not recommended, as:

- **ONLY** one proposal per team will be accepted.
- An entity can be granted **ONLY** once.

Note that the regular functioning of the F6S platform limits to one application submission per F6S user in each call.

If an F6S user wishes to submit more than one application, for example on behalf of different legal entities, the F6S user should request support from the F6S support team support@f6s.com at **least 10 days prior the open call deadline**.

3.5 Language

English is the official language for CORTEX[2] Open Call. Submissions done in any other language will be disregarded and not evaluated.

[1] Entities from Overseas Countries and Territories (OCT) are eligible for funding under the same conditions as entities from the Member States to which the OCT in question is linked.

[2] https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/list-3rd-country-participation_horizon-euratom_en.pdf

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English is also the only official language during the whole execution of the CORTEX^2 programme for both tracks. This means that it is mandatory that the submission of deliverables is done in English to be eligible.

3.6 Conflict of interest

IMPORTANT: To avoid conflicts of interest, applications will not be accepted from persons or organisations who are partners in the CORTEX^2 consortium or who are formally linked in any way to partners of the consortium. Please check the list of partners at https://cortex2.eu/team/

Applicants shall not have any actual or/and potential conflict of interest with the CORTEX^2 selection process and during the whole project. The winning applicants will be required to declare that they know of no such potential conflicts of interest by submitting ANNEX 3 - CORTEX2 Declaration of Honour during the contracting phase.

All suspected cases of conflict of interest will be assessed case by case. In particular, applicants must take all measures to prevent any situation where the impartial and objective implementation of the project is compromised for reasons involving economic interest, political or national affinity, family or emotional ties or any other shared interest ('conflict of interests').

4. HOW TO APPLY?

The submission will be done through the F6S platform at: https://www.f6s.com/cortex2-open-call-2-for-co-developers/apply

The link is directly linked to the project website. The applicants are required to register a profile at F6S to submit a proposal. The templates to the Open Call 2 documents are available here: https://cortex2.eu/open-calls/open-call-2/

These are:

- Annex 2 Application Form at F6S: The form is extracted as document for reference purposes only. The Application form should be directly filled at the F6S platform.
- Annex 2.1 Proposal Template: a document that must be submitted in a pdf format containing the description of the proposed project and uploaded as part of the application form at the F6S platform.
- Annex 3 Declaration of Honour: a template of the declaration of no conflict of interest and that all conditions related to the CORTEX^2 Open Call #1 are accepted by the applying entity(ies). Upon acceptance of their proposal for funding, the signed and stamped declaration must be submitted.
- Annex 4 SME Declaration: Check section 3.2.1.Upon acceptance of their proposal for funding, the signed and stamped declaration must be submitted.

The project proposals must strictly adhere to the F6S application form, which defines sections, required Annexes, and the overall length. Participants are requested to carefully read and

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follow the instructions in the form. Additional material, which has not been specifically requested in the online application form, will not be considered for the evaluation of the proposals and may be subject to withdrawal from the evaluation.

Applying to an open call takes time and dedication and we would like to make sure that you understand the crucial rules:

- **Be on time**: Make sure you submit your proposal through the F6S platform before the deadline of 15 August 2024, 17:00 CEST. If you submit the form correctly, the system will send you a confirmation of your submission (please check your SPAM folder as well). Proposals submitted by any other means are ineligible, hence will not be evaluated.
- **F6S application**: The F6S platform allows you to work flexibly on the content, which is automatically saved once you progress filling out the form.
- **Be exhaustive**: Have you answered all the sections of the form and uploaded all required Annexes? It will not be possible to add any information after you submit your application or reach the submission deadline.
- **Every question deserves your attention**: All sections of your proposal must be filled in. Make sure that the data provided is true and complete. This is crucial for us to properly assess your proposal.
- **Documentation format**: Any document requested in any of the phases must be submitted electronically in PDF format without restrictions for printing.

NOTE 1: It is strongly recommended to not wait till the last moment of submission. **Failure of the Proposal to arrive in time for any reason, including communications delays, or network issues is not acceptable as an extenuating circumstance and will automatically lead to rejection of the submission.**

The time of receipt of the proposal as recorded by the submission system will be definitive.

NOTE 2: Please note that after application submission, editing is not possible. If the applicant discovers an error in the proposal and provided the call deadline has not passed, the applicant may request the Open Call CORTEX^2 team to re-submit the proposal (for this purpose please contact us at opencall@cortex2.eu with a message titled: RESUBMISSION REQUEST). However, CORTEX^2 is not committed that resubmission in time will be feasible in case the request for resubmission is not received by the Open Call CORTEX^2 team at least 48 hours before the call deadline.

5. EVALUATION PROCESS

The evaluation process is shown in **Figure 5.**

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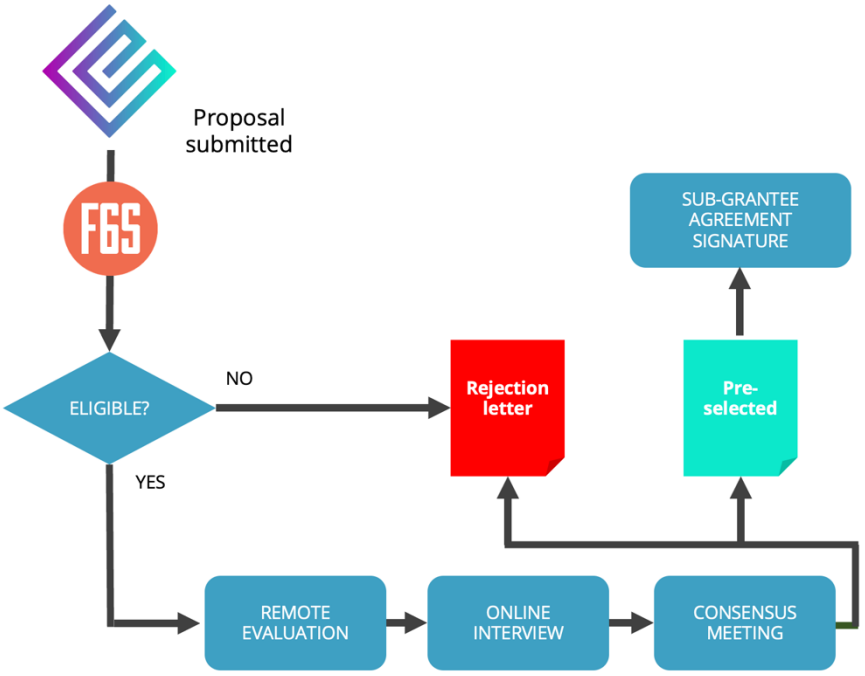

Figure 5 - Evaluation process.

5.1 Step 1- Eligibility Check

Eligibility to participate in the funding programme is initially verified against several eligibility criteria. This process is carried out by the CORTEX^2 team. A proposal may be declared ineligible or inadmissible at any stage. The check will verify:

- **Proposals reception**: via F6S and by the defined deadline.
- **Eligibility filter**: Eligibility check will verify the existence of a legal entity in an eligible country, the uniqueness of the Proposal, the existence of the same entity in other proposals, the alignment with CORTEX^2 call for Proposals, and any conflict of interest.

  In addition, the following information will be checked:

  - All entities are eligible for EC funding under the rules of Horizon Europe [Y/N]
  - For profit organizations are not big companies [Y/N]
  - The application is submitted by a minimum of 1 and a maximum of 2 partners [Y/N]
  - The proposed project is aligned to the Open Call 2 objectives [Y/N]
  - The Proposal is written in English [Y/N]
  - All required documentation as Annex 2.1, are submitted correctly [Y/N]
  - The Proposal does not exceed the maximum available funding

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- The proposal does not exceed the maximum page length

The eligible Proposals will be given to external evaluators to initiate the remote evaluation. The non-eligible applicants will be informed by email. **No additional feedback will be given.**

5.2 Step 2 - External remote evaluation

Proposals considered eligible will move on to the external remote evaluation phase. The external evaluation will be done remotely by expert evaluators. Evaluators will be selected from a pool of experts that will be established through a call for expressions of interest. The experts will be evaluated and selected based on their knowledge of the CORTEX^2 challenges topics and general experience in the evaluation of proposals (e.g., Horizon 2020, HE, FSTP programmes). Expert profiles will be evaluated, and a pool of experts will be established. The top-ranked experts will be invited to evaluate proposals.

The evaluators will perform evaluations on an individual basis, not as representatives of their employer, their country, or any other entity. They are required to be independent, impartial, and objective. All evaluators are required to sign a contract, which includes a declaration of confidentiality and the absence of conflicts of interest. Any known conflict of interest will be immediately communicated to the CORTEX^2 Open Call team. Evaluators will also be bound by strict confidentiality regarding the evaluation process and during the evaluation process.

At least two external evaluators will evaluate each proposal and will be distributed across the proposals based on their expertise and, whenever possible, country of origin.

5.2 Evaluation criteria

The evaluators will follow the 4 evaluation criteria listed in **Table 13.**

The independent experts will score each award criterion on a scale from 0 to 5 (decimal point scores may be given):

- **0= Fail**: The proposal fails to address the criterion or cannot be judged due to missing or incomplete information.
- **1 = Poor**: criterion is inadequately addressed or there are serious inherent weaknesses.
- **2 = Fair**: proposal broadly addresses the criterion, but there are significant weaknesses.
- **3 = Good**: proposal addresses the criterion well, but a few shortcomings are present.
- **4 = Very good**: proposal addresses the criterion very well, but a small number of shortcomings are present.
- **5 = Excellent**: proposal successfully addresses all relevant aspects of the criterion. Any shortcomings are minor.

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The score (including for each criterion) is calculated based on the average of the scores provided by the evaluators. The **threshold for each criterion is three (3),** and the overall score threshold is 12. This indicates that if a proposal scores less than 3 in any criterion or an overall score less than 12, the proposal is automatically rejected.

Each evaluator will record his/her individual assessment of each proposal using an Individual Evaluation Report (IER). The evaluators will hold a consensus meeting to prepare a single consensus Evaluation Summary Report (ESR) for each proposal, representing opinions and final scores on which the evaluators agree and which they will sign.

Table 13 - CORTEX2 Open Call #2 evaluation criteria

CORTEX² Open Call #2 evaluation criteria		
Remote Evaluation Criteria	**Co-development** Scope of evaluation	**Threshold**
Technical Excellence	• Level of innovation and technological challenges addressed. • Concept fit to the call track and the 9-month programme; • Application must demonstrate a clear set of technical objectives per selected Topic of application. • Quality, credibility, and clarity of the technical description of how to achieve the objectives. • Level of integration with CORTEX² technologies to test and validate. • Feasibility of the proposed work and technological contribution.	3/5
Ambition & Impact	• Applicants must define their ambitions and a clear set of expectations aligned with the objectives of the Call Track 1. • Proposals must demonstrate impact on the CORTEX² framework and its contribution to the XR ecosystem. • Overall impact of the proposed project if successful. • XR Industrial relevance and exploitation plans. • Gender/accessibility/inclusion impact addressed, if applicable. • Quality of the exploitation plan and market potential. • Effectiveness of the proposed measures to exploit and disseminate. • Potential of the outcomes to be adopted/used by other entities into regular practices	3/5
Team Skills & Expertise	• Quality of the entity (ies). • Clarity of each partner role, if applicable. • Technical capacity and excellence of the technology developer/provider. • Quality of the individual participants competences.	3/5
Project Planning &	• Quality, effectiveness and clarity of project activities, structure, and timing. • Appropriateness of deliverables, KPIs and means of verification.	3/5

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Value for Money	• Allocation of appropriate resources to the proposed project. • Justification of the proposed resources and their deployment.	

5.3 Step 3 - Intermediate ranking of proposals

At the end of the evaluation process (Step 2), all proposals will be ranked. The primary rule for ranking proposals will be based on their overall average score (summary of criterion 1 to 4), while considering the minimum and maximum number of proposals to be selected. In case there is an insufficient number of proposals for all Topics (total or that have not met the threshold), the top-ranked proposals from existing Topics will be selected. In the case there are proposals in the same position, tie-breaks will be addressed by giving priority to the proposals with the highest score in specific criteria, considering the following order:

- Rule 1: Proposals will be ranked based on their overall score (sum of scores for criteria 1 to 4).
- Rule 2: After applying Rule 1 and if there are proposals in the same position, priority will be given to proposals that have the highest score on Ambition & Impact.
- Rule 3: After applying Rule 2 and if there are proposals in the same position, priority will be given to proposals that have the highest score on Technical Excellence.
- Rule 4: After applying Rule 3 and if there are proposals in the same position, priority will be given to proposals that have the highest score on Team Skills & Expertise.
- Rule 5: After applying Rule 4 and if there are proposals in the same position, priority will be given to proposals that have the highest score on Project Planning & Value for Money.
- Rule 6: After applying Rule 5 and if there are proposals in the same position, priority will be given to those addressing gender/accessibility/inclusion impact.

The top-ranked proposals – at least 14 of proposals will be invited to an online interview. Furthermore, at least 1 proposal within each Topic (if their score meets the minimum threshold) will be invited to the online interview. This applies in the case that proposals have been submitted to all Topics.

5.4 Step 4: Consensus meeting

Evaluators involved in the remote evaluation will carry out a consensus meeting with the objective of gathering their evaluations, defining a common score for the proposals, and preparing evaluation reports.

5.5 Step 5: Online interview

The objective of the interview is to better understand the proposal, particularly its quality and excellence, the expected impact and exploitation potential, quality of the workplan, and quality

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of the applicant(s). Any complementary material that can support the presentation of the project is acceptable during the interview. Interviews will be carried out by a selection of the internal evaluators. Members of the CORTEX^2 team directly involved in the selected Topic that each Proposal is addressing will participate in the interview and respective evaluation process. Interviews are expected to last approximately 30-45 min. The Applicants are expected to prepare and present a presentation (approximately 15 minutes) and answer any questions regarding their proposal from the internal evaluators. For applications where potential ethical considerations were identified in previous evaluation stages, an ethical expert from the consortium will be invited to the interview to assess these aspects. At least 2 evaluators are expected to participate in each interview.

The online interviews will evaluate proposals against the following evaluation criteria:

Table 14 - Interview evaluation criteria.

Interview criteria	**Description**
Concept & Innovation	• Alignment with/ contribution to CORTEX^2 (Topic/Domain) and its ecosystem. • Quality and novelty of the proposed project concept and innovation (technology focused).
Impact & Exploitation	• Impact on the XR ecosystem. • Path towards exploitation/market of results.
Workplan & Applicants	• Rationale and ambition of the workplan. • Capacity and experience of the applicant. • Any risks and mitigation plans. • Rationale of the project budget and resources.

Internal evaluators will score each criterion between 0 and 5. If at any time during the interview the applicants do not commit to what was included in the submitted proposal, the proposal will be automatically disqualified. If after the interview process the evaluators still have questions, the applicant may be requested to provide additional information in writing.

5.6 Step 6: Final ranking and selection

After the online interview process, all proposals will be ranked according to the average scores obtained from (1) the external remote evaluation and (2) the online interviews.

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Ten proposals will be selected.

The proposals with higher scores will be selected until reaching the available funding. However, the CORTEX^2 Consortium is not obliged to select the highest scoring proposal where it has objective grounds for objecting to the participant if, for example, commercial competition issues or strategic issues to balance technologies between the different platforms available in CORTEX^2 become apparent during the evaluation process. In this case, the choice may pass to the next ranked proposal.

All eligible Proposals will receive an acceptance or rejection letter together with an anonymised version of their Evaluation Summary Report (ESR). Proposals not having passed to the online interview stage will receive a report with results of the external remote evaluation. Proposals that passed to the online interview will receive a report with information from both the remote evaluation and interview stages.

5.6 Redress process

An applicant may submit a request for redress if they believe the results of the eligibility checks have not been correctly applied, or if they feel that there has been a shortcoming in the application of the rules of the CORTEX^2 - Open Call #1. Requests for redress must:

- Be received within three (3) working days from the reception of (1) a rejection letter considering the proposal as non-eligible or (2) the ESR information letter.
- Indicate the subject of the complaint and clearly describe it, with arguments/ evidence that sustain the complaint.
- Be sent by the entity's legal representative that has also submitted the proposal. In case a request for redress is received, an internal review committee from CORTEX^2 will examine the applicant's complaint. The committee will review the complaint and recommend an appropriate course of action. If there is clear evidence of a shortcoming that could affect the eventual funding decision, it is possible that all or part of the proposal will be re-evaluated.

Please note:

- This procedure is concerned only with the eligibility/ evaluation organisation process.
- The committee will not question the scientific or technical judgement of the expert evaluators applied in evaluating the proposals.
- A re-evaluation will only be carried out if there is evidence of a shortcoming that affects the final decision on whether to fund the proposal or not.
- The evaluation score following any re-evaluation will be regarded as definitive. It may be lower than the original score.
- Anonymous or incomplete complaints will not be considered.

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- Only one request for redress per Proposal will be considered by the committee. All requests for redress will be treated in confidence and must be sent to CORTEX^2 at: opencall@cortex2.eu

6. CONTRACTING

6.1 Sub-granted project negotiation and onboarding

At the end of the evaluation phase, ten proposals will be selected. The other proposals that were invited to the interview stage will remain on a reserve list in case one of the selected proposals fails to sign the sub-grant agreement.

6.2 Contract preparation

After the Open Call evaluation conclusion and project selection, the CORTEX^2 coordinator will start the contract preparation in collaboration with the selected proposals' coordinators. Contract preparation will go via administrative and financial checking (and potentially into technical or ethical/security negotiations) based on evaluators' comments. On a case-by-case approach, a phone call or teleconference may be needed for clarification.

The objective of the contract preparation is fulfilling the legal requirements between CORTEX^2 Consortium and every beneficiary of the call. The items covered will be:

1. Inclusion of the comments (if any) in the ESR of the Proposals and mapping to the Sub-grant agreement (Contract).

2. Validation of the legal documents

The objective of the contract preparation is to fulfil the legal requirements (Table 15) between the CORTEX^2 consortium and each beneficiary of the open call.

Note: the contract as provided to the sub-grantee is final and may not be changed, including the addition or removal of any articles or other content. All documentation that requires a signature (e.g., Declaration of Honour, SME Declaration (if applicable), Bank Account, and sub-grant agreement must be signed by hand (e.g., with the same signature on the identity card) or with a valid electronic digital signature. CORTEX^2 reserves the right to request one or the other types of signatures for specific documentation.

Table 15 - Requirements for contract preparation.

Legal requirement	Description
Proof of legal existence	Company register, official journal or other official document per country showing the name of the organisation, the legal address and registration number and a copy of a document proving VAT registration (in case the VAT number does not show on the registration extract or its equivalent)

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Specific to SMEs

1.Proof of the SME condition is required:

- If the applicant has been fully validated as an SME on the Beneficiary Register Participant Portal, the PIC number must be provided.
- If the applicant has not been fully validated as an SME on the Participant Portal, the following documents will be required to prove the status as an SME:
    - SME Declaration (**Annex 4**) signed (with a valid e-signature or by hand) and stamped: In the event the beneficiary declares being non-autonomous, the balance sheet and profit and loss account (with annexes) for the last period for upstream and downstream organisations is required.
    - Status Information Form, which includes the headcount (AWU), balance, profit & loss accounts of the latest closed financial year and the relation, upstream and downstream, of any linked or partner company.

2. Supporting documents. In cases where either the number of employees or the ownership is not clearly identified: any other supporting documents which demonstrate headcount and ownership such as payroll details, annual reports, national regional, association records, etc.

Declaration of Honour (Annex 3)	Signed declaration that all conditions related to the CORTEX^2 Open Call #1 are accepted by the applying entity (s).
Sub-grant agreement (Annex 5)	Signed between the CORTEX^2 consortium, represented by its coordinator (DFKI), and the beneficiary. The sub-grant agreement will also include the comments (if any) of the proposal's ESR to the work plan.
Bank account information (Annex 6)	The account where the funds will be transferred will be indicated via a specific form signed by the entity, individuals, and the bank owners. The holder of the account will be the entity/ individual.

It should be emphasised that each SME should provide at contract preparation time a valid VAT identification number. Failure to provide the VAT[3] number will automatically result in proposal rejection.

The request, by CORTEX^2 Consortium, for the above documentation will be done within predefined deadlines. In general, the sub-project negotiation should be concluded within 2 weeks. An additional week may be provided by the CORTEX^2 coordinator in case of significant reasoning. In case contracting has not been concluded within the above period, the Proposal is automatically rejected and the next proposal on the reserve list is invited.

[3] To be checked at European Commission services such as http://ec.europa.eu/taxation_customs/vies/

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6.3 Contract signature

At the end of the contracting phase, the sub-grantee funding agreement will be signed between the CORTEX^2 Consortium represented by its coordinator (DFKI), and the selected beneficiary, represented by its leader.

In case of applying consortia, the consortium leader and the other consortium partners are responsible to make an agreement that shall cover the rights and obligations between them.

7. ACTIVITIES DURING THE FUNDED PROGRAMME

7.1 CORTEX^2 9-month programme for third party co-development projects

7.1.1 Sprint 1

Sprint 1 is associated with the starting point of each project and will have a maximum duration of 3 months. Within this phase, the beneficiary must fine-tune their planning and technology usage with CORTEX^2, design a detailed development plan aligned with the CORTEX^2 objectives and perform their technical developments.

The Development sprint should include the following:

- Description of how the project will be carried out.
- Description of the technologies to use.
- Reporting of the technical development.
- List of detailed milestones and KPIs to achieve (metrics and target values for how the success will be determined).

At the end of Sprint 1, Beneficiary(ies) will have to deliver the assigned deliverable as a means of verification of work performed. It must include a publishable summary of the results obtained at this stage. A specific report can be requested by the CORTEX^2 team.

7.1.2 Sprint 2

Within this sprint, projects will perform their integration to achieve what has been previously developed. The Beneficiary(ies) should consider the following:

- Reporting of the implementation.
- Configuration of units and software.
- Reporting of the operation initiation.
- Reporting of technology deployment by the end-user.
- Collection of relevant data.

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- Project performance (in terms of quantitative KPIs identified in the previous phase).
- Proof that the CORTEX^2 tech offering has been used and integrated for the project purposes.
- Provide a Demo (including a video to be published on the CORTEX^2 YouTube channel.

At the end of the Sprint 2, Beneficiary(ies) will have to deliver the assigned deliverable as a means of verification of work performed. It must include a publishable summary of the results obtained at this stage. A specific report can be requested by the CORTEX^2 team.

7.1.3 Sprint 3

Sprint 3 is critical to leverage the results of the previous Sprints. The aim is to validate the co-development performed and foster the exploitation of project results. Within this phase, projects must focus on the validation, assessment, and exploitation of results/achievements. The assessment and exploitation should include the following:

- A demonstrator and a report on the developed feature.
- For exploitation: a business plan for the exploitation of the result.
- Presentation of the final module with a documentation.
- Validation of the source code of the final product, if applicable.
- Upload the source code on a repository on git, if applicable.

At the end of Sprint 3, Beneficiary(ies) will have to deliver the assigned deliverable as a means of verification of work performed. It must include a publishable summary of the project's results and feedback to the obligatory Impact Assessment that will be run by the Open Call management. A specific report can be requested by the CORTEX^2 team.

7.2 Evaluation

The milestones, KPIs and deliverables will be evaluated at the end of each Sprint. A remote review will take place after each phase to evaluate the progress of the Beneficiary(ies).

The sub-granted project must submit to the CORTEX^2 consortium the deliverable(s)/report(s) corresponding to each Sprint by the last calendar day of the respective Sprint/Phase, unless otherwise indicated by the CORTEX^2 consortium.

The review will be remote via a teleconference platform. The Beneficiary will make a presentation of the work done, analyse the progress and answer questions from the CORTEX^2 experts.

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After the review, the Beneficiary will receive a review report, including comments and potential recommendations. The report will also state if the deliverables are accepted or not. On acceptance of the deliverables, payments will be released no later than thirty (30) natural days after the notification by the Contractor.

On rejection of any of the deliverables, or in case of a not satisfactory review, the Beneficiary(ies) will be requested to re-submit improved deliverables. Based on that update, the CORTEX^2 experts will take decision if the project can continue to the next Phase, or if the risk of failure is too high. If the rejection of a deliverable or an unsatisfactory review happens in the last Sprint (3) the CORTEX^2 Consortium will consider if a short extension can be allowed to invite a project to update and resubmit deliverables, hence qualifying for its payment, if and when said deliverable is approved.

7.3 Participation in events

During the three Sprints, the selected Beneficiary(ies) should participate in various types of events (audio calls, video calls, webinars, online training, virtual conferences, etc.) organized or suggested by the CORTEX^2 Consortium, to support the integration of their solution in the CORTEX^2 framework, extend their knowledge on the CORTEX^2 project, XR-related technologies, and its market.

8. Resources and tailored support provided within CORTEX^2 Assistance Programme

Within the duration of the programme each Beneficiary will be appointed a **mentor** and a **monitor**.

The mentor is an individual, from the CORTEX^2 consortium with expertise in the topics and solutions being addressed within the project. The mentor will be responsible for supporting, providing feedback, motivating, and evaluating the Beneficiary.

Specifically, the mentor will:

- Organise regular calls with the assigned project (e.g., once every month or as agreed with the mentor).
- Ensure that the work plan, deliverables, and project reports are delivered on time.
- Follow the project's progress towards achievement of defined KPIs and results (sub-granted project progress).
- Provide a technical evaluation of the deliverables and reports submitted by the Beneficiary, including approval, rejection, or request for improvements.
- Engage with other CORTEX^2 partners to discuss needs from the sub-granted project.

The monitor acts as an administrative contact during the implementation of the project. The monitor will liaise with the sub-granted project's assigned mentor to ensure its successful implementation.

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Specifically, the monitor will:

- Monitor the progress of the project with the support of a monthly survey.
- Liaise with the project's monitor about the progress of the respective project and discuss any issues arising in the monthly survey.
- Collect the deliverables and reports from the beneficiary and share them with the respective mentor for evaluation.
- Organize the reviews at the end of each Sprint/Phase.
- Report to the CORTEX^2 coordination with progress for reporting purposes.

In addition to the recurrent monitoring and mentoring, CORTEX^2 will also provide the projects with tailored support with the objective of maximising the exploitation and commercialisation potential of the projects, such as:

- CORTEX^2- Rainbow Multimodal Collaborative Platform - administration, cloud hosting and open API.
- Tailored expert support depending on the selected co-development Topic.
- Integration and validation support.
- Dissemination of achievements.

8. FINANCIAL SUPPORT PROVIDED

8.1 Financial support

Each selected project is eligible to receive a grant of up to 100,000 EUR. For accessing the funding, the third-party projects deployment needs to demonstrate and present proofs of their progress and achievements and the deliverables presented must be assessed positively in each of the stages. In case of missing the above, the third parties are not paid and may be requested to not participate longer in the CORTEX^2 project.

The grant received by the third parties is to finance:

- Work performed by employees of the third-party.
- Investment in software/ hardware (only the value associated with its depreciation).
- Travels associated with the project deployment or CORTEX^2 activities.
- Participation in events/ conferences and promotion campaigns associated with CORTEX^2
- Minor (<15%) subcontracting of non-key domain expertise is allowed but must be justified.

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The selected 10 projects will become part of CORTEX^2 activities for the 9 months period composed of 3 Sprints. Payments will be done in 3 instalments (40% + 35% + 25%) based on concrete results, deliverables, and review of each Sprint. Summary of funding:

Table 16 Payment distribution

Programme Sprint	Duration	Funding	Example of €100.000
SPRINT 1	3 months	40%	€ 40.000
SPRINT 2	3 months	35%	€ 35.000
SPRINT 3	3 months	25%	€ 25.000

Detailed payment schedule and payment conditions will be settled in the Sub-grant (Beneficiary) Agreement (Annex 5).

9. RESPONSIBILITY OF BENEFICIARIES

The selected third-party is indirect Beneficiary of the EC funding. As such, they are responsible for the proper use of the funding and ensure that the recipients comply with obligations under Horizon Europe specific requirements as described in Horizon Europe.

9.1 Data protection and confidentiality

During the implementation of Open Call 1 activities and for four years after the end of the programme activities, the Beneficiary(ies) must keep confidential any data, documents, or other material (in any form) that is identified as confidential at sub-contract signature ('confidential information').

The selected Beneficiary(ies) may disclose confidential information to the CORTEX^2 Consortium and to the selected reviewers, who will be bounded by a specific Non-Disclosure Agreement.

9.2 Promoting action and giving visibility to the EU funding

The selected Beneficiary(ies) must promote the programme activities, the CORTEX^2 project and its results, by providing targeted information to multiple audiences (including the media and the public) in a strategic and effective manner and to highlight the financial support of the EC. Detailed requirements will be listed in sub-grant Agreement (Contract) – Annex 5.

Any publicity made by selected third-party in respect of the project, in whatever form and on or by whatever medium, must specify that it reflects only the author's views and that the EC or CORTEX^2 project is not liable for any use that may be made of the information contained therein.

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The EC and the CORTEX^2 Consortium shall be authorised to publish, in whatever form and on or by whatever medium, the following information:

- the name of the selected project members;
- contact address of the selected project;
- the general purpose of the project;
- the amount of the financial contribution foreseen for the project; after the final payment, and the amount of the financial contribution received;
- the geographic location of the activities carried out;
- the list of dissemination activities and/or of a patent (applications) relating to the foreground;
- the details/references and the abstracts of scientific publications relating to the foreground and, if funded within CORTEX^2 project, the published version or the final manuscript accepted for publication;
- the publishable reports submitted to CORTEX^2;
- any picture or any audio-visual or web material provided to the CORTEX^2 in the framework of the project.

10. INTELLECTUAL PROPERTY RIGHTS

When participating in the CORTEX² project, successful applicants will enter a co-creation process with the current partners of the CORTEX² consortium. In the case where the applicant produces a software, data, know-how or information independently on any other partner, the applicant will remain the sole owners of their respective IPR. In case of co-creation with multiple partners, an IPR co-creation is applied where generation IPR will be established through the joint efforts of multiple parties.

Each Beneficiary shall bear sole responsibility for ensuring that its acts within the project do not infringe third party property rights. Therefore, there is no obligation to conduct research with regard to the property rights of third parties.

In Annex 5, applicants shall identify their Background for the Project and should also, where relevant, informed the CORTEX² consortium that access to specific Background is subject to legal restrictions or limits.

During implementation, access rights to results of the project and Background needed for the performance of the own work of a party under the project shall be granted on a royalty-free basis, unless otherwise agreed for Background in Annex 5.

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For the exploitation, access rights to results if needed for exploitation of a party's own results shall be granted on fair and reasonable conditions and upon prior written agreement. Access rights to results for internal research and for teaching activities shall be granted on a royalty-free basis.

The CORTEX^2 Consortium itself will not retain an equity stake in any applicant's company, nor will it retain any IPR. However, the CORTEX^2 Consortium will be granted the right to make internal use of any IPR applicants produce as part of their CORTEX^2 Open Call activities.

CORTEX^2 and the European Commission may ask participants who have received funding to present their work as part of public relations and networking events to showcase the benefits of the CORTEX^2 project.

11. Checklist

1) **Does your planned work fit with the call for proposals?** Check that your proposed work does indeed address the Open Call 2 objectives

2) **Is your proposal eligible?** The eligibility criteria are given in chapter 3 "Eligibility Criteria". Any proposal not meeting the eligibility requirements will be considered ineligible and will not be evaluated.

3) **Budgetary limits**. Check that you comply with any budgetary limits as expressed in chapter 8 "Financial support provided".

4) **Is your proposal complete?** Have you completed all mandatory questions?

5) **Does your proposal fulfil the requested information?** Proposals should be precise, and concise and must answer to requested information, which is designed to correspond to the applied evaluation. Omitting requested information will almost certainly lead to lower scores and possible rejection.

6) **Have you maximised your chances?** There will be strong competition. Therefore, edit your proposal tightly, and strengthen or eliminate weak points.

7) **Have you submitted your proposal before the deadline?** It is strongly recommended not to wait until the last minute to submit the proposal. Failure of the proposal to arrive in time for any reason, including network communications delays, is not acceptable as an extenuating circumstance. The time of receipt of the application as recorded by the submission system will be definitive.

8) **Have you provided the necessary annexes?** Pdf of Annex 2.1 Proposal Template uploaded as part of the application filled in on the F6S page

9) **Do you need further advice and support?** You are strongly advised to communicate with the CORTEX^2 team.

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12. Contact

The CORTEX^2 Consortium serves the following support:

- F6S Online Q&A: https://www.f6s.com/cortex2-open-call-2-for-co-developers/discuss
- F6S support team: support@f6s.com
- Open Call #2 Documents: https://cortex2.eu/open-calls/open-call-2/#documents
- More info at: https://cortex2.eu/open-calls/open-call-2/

For extraordinal communication need, please contact the Help Desk: opencall@cortex2.eu

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CORTEX²

ANNEX 1.1 Technical Description

Open Call 2:
Submission deadline: **15 August 2024, 17:00 CEST**

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Disclaimer

LEGAL NOTICE

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1. INTRODUCTION

The goal of CORTEX^2 Open Call 2 is to extend an opportunity to third parties to participate in the co-development of the XR and AR teleconference platform. The objective is to deliver an inclusive XR teleconference platform while involving organisations in the 'Lab-To-Market' stage that will bring new modules and features, enhancing the functionalities and opportunities CORTEX^2 can provide. Additionally, through open call 2 the project aims to assess and validate the social impacts associated with XR technology adoption. A total of 1 million Euro will be invested in CORTEX^2 Open Call 2.

This document referred to as ANNEX 1.1 Technical Description, provides a detailed description of CORTEX^2 architecture and services available to beneficiaries under their participation in the CORTEX^2 Assistance Programme for co-developers (9months duration).

The document shall be treated as an extension of Annex 1 – CORTEX^2 Guidelines for Applicants.

All associated Annexes must be additionally considered for the submission of a Proposal under CORTEX^2 Open Call 2.

2. CORTEX^2 Architecture and Services

CORTEX^2 aims to deliver a next generation telecooperation framework based on XR and AI technologies. This section provides information on the platform architecture that shows the modules, interfaces and covered functionalities that are available within CORTEX^2. These shall be considered from the applicants when suggesting their co-developed modules and features.

The architecture of the platform is described in three layers of Figure 1: the Cortex Client block that will work on the client side, the Cortex Core block that will work on the infrastructure or cloud side and the Third-party block that represents partner functionalities provided as a service, i.e., deployed in an external infrastructure.

The following sections provide detailed information about each of the individual components that make up the CORTEX^2 solution.

The description of the architecture covers modules that are currently being developed and all of them will be available only at the end of the project. Please refer to chapter 2.5 to have a clear snapshot of the available Cortex Framework when the OC2 projects are starting.

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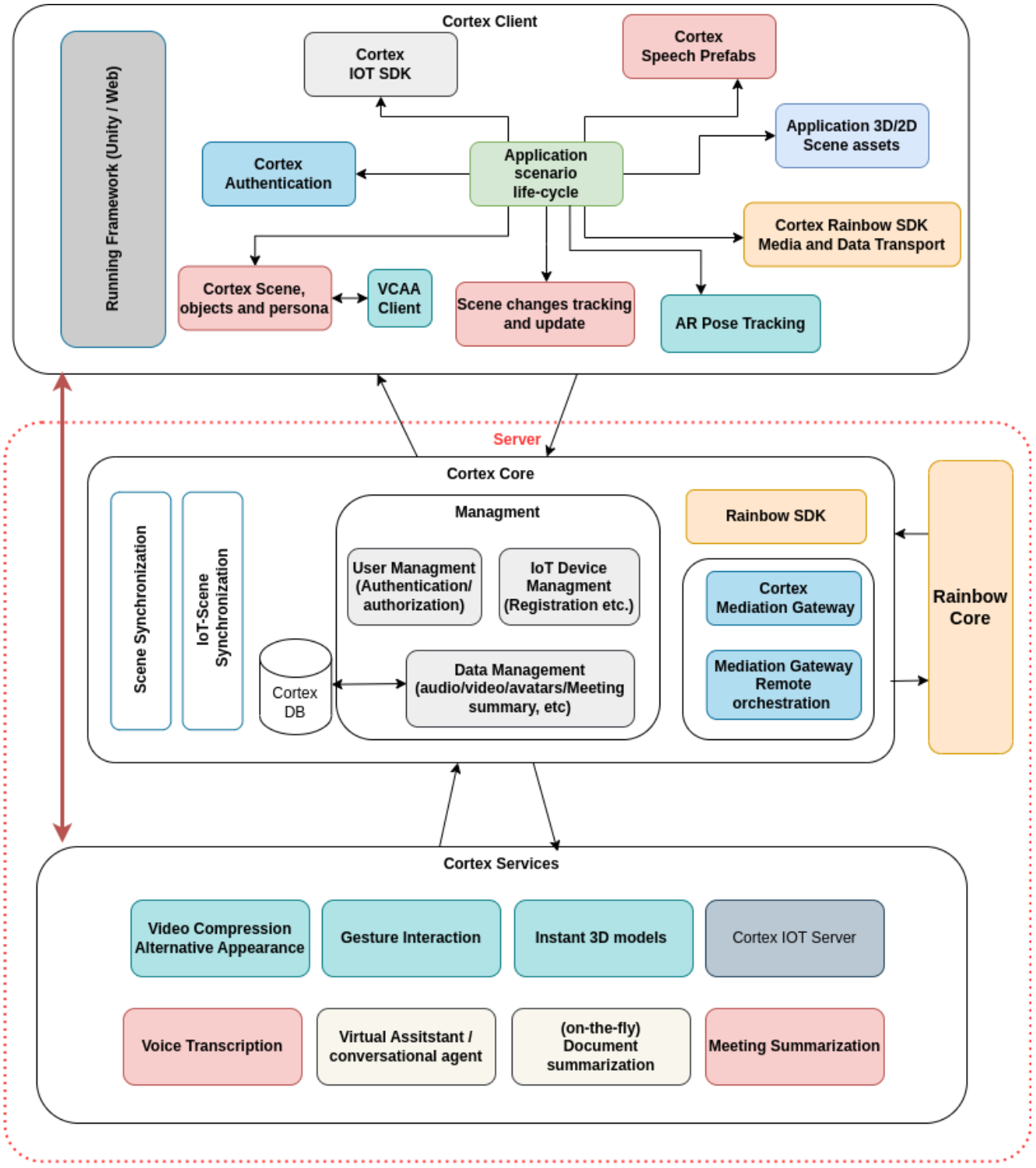

Figure 1: CORTEX² high-level architecture

2.1. CORTEX Client components

A CORTEX² application can have several views according to the role that the user can take. We can notice that especially for an industrial use case and a learning use case, different types of users are involved in the same application but have different views depending on the role they play in the cooperation.

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The components of Figure 2 will be developed to run on the XR device, laptop or smart phone in order to provide the user with the appropriate interface for his application. They are very dependent on the application domain. Due to the vast heterogeneity of possible applications, it is not planned to develop an application authoring tool to build applications. Instead, we provide interfaces for Mozilla Hubs and Unity for creating CORTEX² applications based on these specific engines. Each application may have to use only a part of these components because the user views, for the same application, could be very different, and some components may not be necessary for another type of application. A brief description of each component is given below:

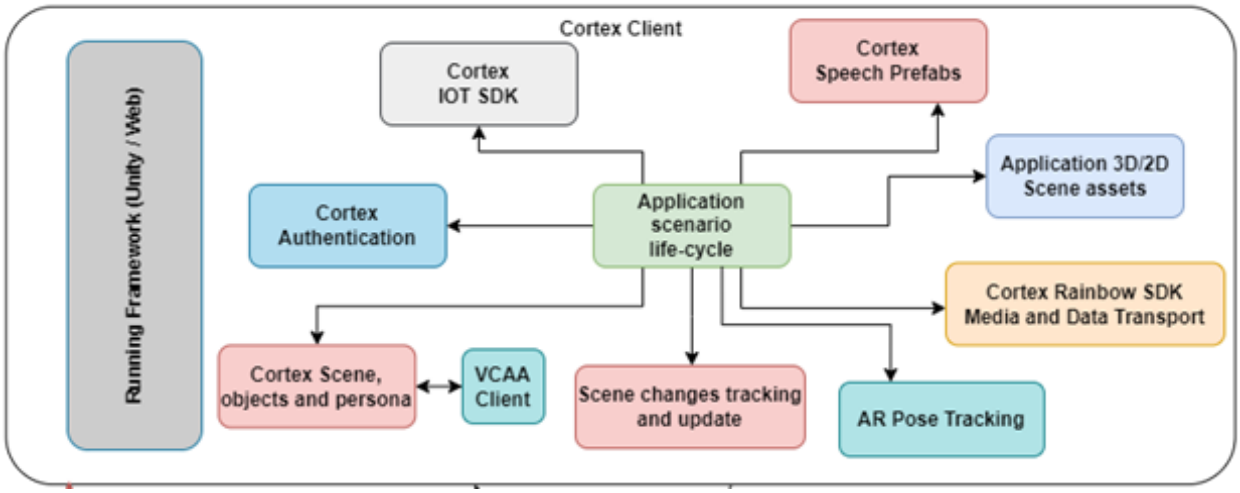

Figure 2: Architecture of the CORTEX² Client

- **Application scenario life cycle** is the heart component of CORTEX² APP. it manages the life cycle of the application by invoking the functionalities provided by other elements of the architecture.
- **Cortex authentication** is used for access management, user role and profile.
- **Cortex scene, objects and persona** is managing the different participants avatars and scene representation.
- **Scene changes tracking and update** shares authorized changes or events in a scene between the different participants, for example, if an object is moved by a user A, this might impact the rendering of user B application.
- **Application 3D/2D scene assists** are providing necessary objects needed to the construction of scene. Some predefined objects and scenes are stored in the Cortex core Database to allow quick starting of a Cortex app.
- **Cortex Rainbow SDK media and data transport** is used to connect to the core components and data transportation including the different media.
- **Cortex speech prefabs** is managing advanced conversational features and allow voice interaction to use within the rendering framework and targeted devices. For meeting summarization, users with an organisational role should authenticate to the conversational manager service provided by LINAGORA to review the auto-generated summary.

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- **Cortex IoT SDK** provides the end-user applications with the libraries/mechanisms required to enable the access to and interaction with the IoT objects, either from the Cortex Core components or directly from the uiTOP platform, provided by ICOM uiTOP platform may have to integrate with the Cortex Core authentication mechanisms in order to handle users' access rights to IoT objects. The Cortex IoT SDK participates in the translation of the end user VR/AR "language" to an internal IoT format, readable by the Cortex Core or the uiTOP.

2.2. Core components

The core components (Cortex Core and Rainbow Core) are modules running on a server that can be used by any application. These modules are providing the core server functionalities that are necessary to run a telecooperation application. Two core components are identified and presented in Figure 3. They are detailed in the following sections.

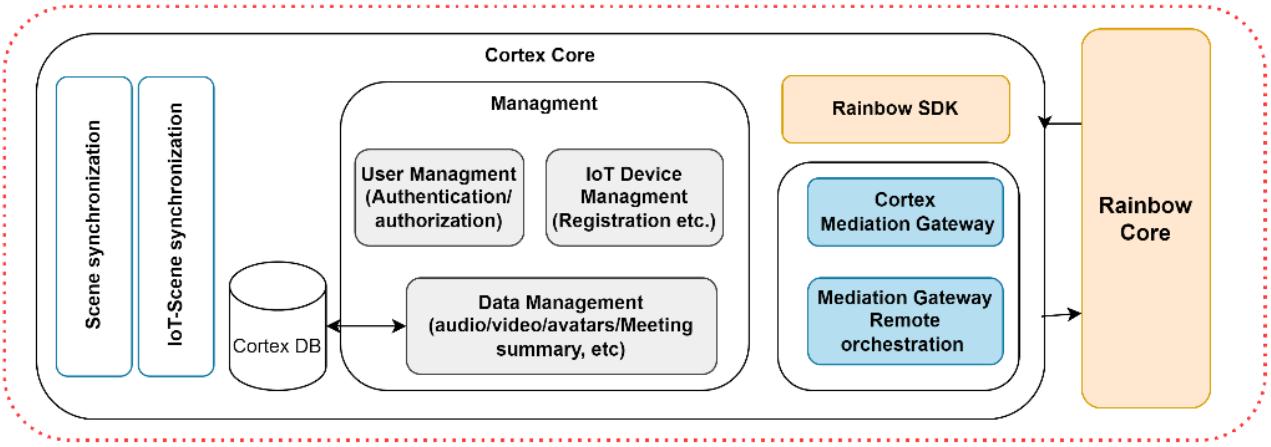

Figure 3: Architecture of the CORTEX² Core Components

1. Rainbow Core

Rainbow-core, provided by Alcatel Lucent Enterprise, is dedicated to connectivity and media transportation through its available SDK in the client side. Rainbow-core supports user authentication access using email and password, or the delegation of authority. It also includes the capability of collaboration and conferencing within “bubbles”, which are setup and monitored through the Rainbow SDK. Rainbow-core handles all communication channels for data exchange between participants in the collaborative room. It is also in charge of transporting medias, signalization and metadata to the right Mediation Gateway connected the XR services modules.

2. Cortex Core

Cortex-core brings together a set of components that are identified from the requirements and are developed within the project. They have the specificity to belong to the same deployment infrastructure, unlike some services that will be developed and deployed outside the cortex core environment.

- **Cortex-DB** is used for data persistence including 3D models, speech recognition data, users' profiles, IoT objects information, etc.

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- **Management core** is made up of three components. They provide a set of utilities for user's and IoT registration, role management and authorizations. End-users' authentication is done through Rainbow SDK. It also allows the management and provision of media streams and other data in the platform. Particularly, IoT device management connects IoT world to Cortex XR world by giving access to associated sensors data or actuators. There is no generic administration GUI and it has to be considered according to pilots' usage.
- **Scene synchronization** is used to align scenes views across multiple shared virtual (or augmented) user environment. The synchronization will be achieved via data and events routing relaying on Cortex App components (Scene changes tracking and update, Cortex Rainbow SDK media and data transport) and Rainbow core.
- **IoT Scene synchronization** has the same goal as the previous element but with sharing restrictions taking into account the user's preferences and, security and privacy raisons. In case an IoT object is visible and usable by to other users, then actions or sensors status should be synchronized across users' scenes. Regarding IoT integration, uiTOP platform may be accessed either directly from the end-user application or through the Cortex core server components, also taking into account whether the information from the actuation/sensor needs to be shared or not.
- **Cortex Mediation Gateway** handles the routing of medias and metadata to the most appropriated XR and speech technologies services.
- **Rainbow-SDK** is a Rainbow Core Client simplifying the API access and management to the **Rainbow Core** APIs.
- **Mediation Gateway Remote Orchestration** is a component responsible of routing calls to external services from the Cortex Mediation Gateway.

2.3. Cortex services

Cortex services are modules provided as services and deployed outside the platform to facilitate integration. Their use is optional and dependent on the application. Incoming or outgoing media data, to these services, is driven by the Cortex Mediation Gateway via the Rainbow Core media server.

Identified services from the requirements are represented in Figure 4 and are described in the following section.

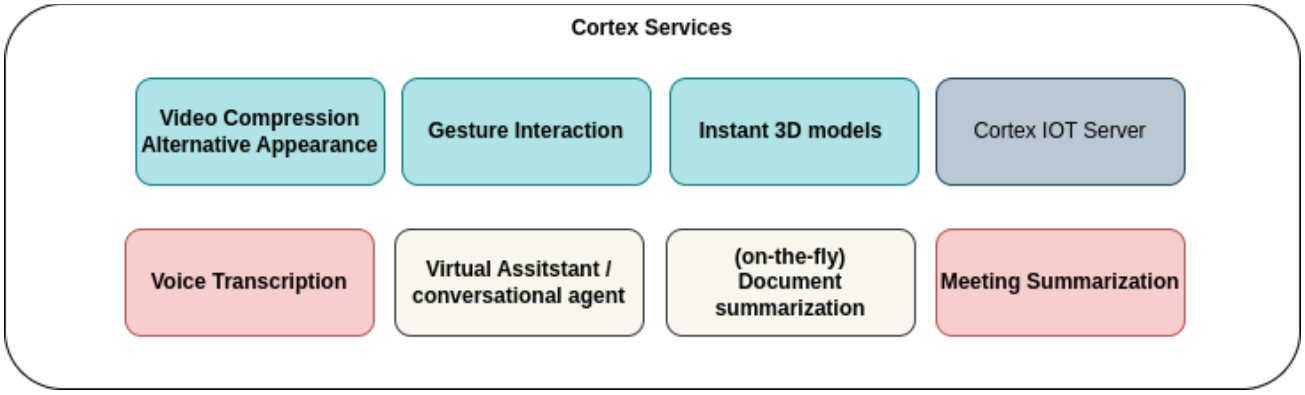

Figure 4: Set of the CORTEX² Services

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- **Video Compression/Alternative Appearance service** is a module with two functionalities. On the one hand it can be used to save bandwidth when multiple users participate to the virtual cooperation environment. Instead of the transmitting 2D video, only metadata, low-dimension representation, is transmitted, and the video is reconstructed on the client side. On the other hand, the reconstructed video can be based on an alternative appearance, changing the physical appearance in the video of the user. DFKI will provide the encoder/decoder component.
- **Gesture Interaction service** reproduces hand poses from real user gestures and makes them available for a virtual interaction with real objects.
- **Instant 3D models service** implements and provides necessary APIs for AR scene analysis and objects recognition.
- **Voice Transcription service** provides live speech to text technology for different languages.
- **Virtual Assistant/Conversational Agent service** provides design patterns to handle live interaction between users and the Cortex app or users and the virtual assistant in cooperation environment.
- **Document Summarization service** is used to extract summaries from written documents, saved as files or stored in databases.
- **Meeting Summarization service** implements and provides discourse summarization API. In addition, a conversational tool will be made available to extend the generated summaries with annotation and NLP based tasks.
- **Cortex IoT server** is based on ICOM's uiTOP platform to implement and provide the necessary APIs for the management of IoT objects and their data including IoT objects registration/connectivity, monitoring/measurements, as well as actuation. The relevant flow goes through the Cortex core components.

2.4. CORTEX² data privacy and security

Security and privacy are two essential pillars in software development.

The following section gives a broader context of the concepts of data security, integrity, sovereignty, and privacy.

Data security is the procedure in which it is made sure that data is protected from being accessed, manipulated, or corrupted by unauthorized personnel or applications during its span of life. It includes activities such as data encryption and hashing, multi-factor authentication, access control, breach response, network security or activity monitoring.

Data integrity or often also called data quality, indicates how consistent and untampered a set of data is regardless of where and how it is stored. It ensures that data is accurate, reliable and available to authorized parties.

Data sovereignty makes sure that your data is always subject only to the laws of the country which it is located in.

Data privacy is concerned with proper handling, processing, storage and usage of personal data. According to the law, personal data means any information relating to an identified or

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identifiable individual; an identifiable person is one who can be identified, directly or indirectly, in particular by reference to an identification number (e.g., social security number) or one or more factors specific to his physical, physiological, mental, economic, cultural or social identity (e.g., name and first name, date of birth, biometrics data, fingerprints, DNA…) (CNIL definition). Ensuring data privacy requires scouting and applying regulation, deploying policies and practices, governing data and third-parties.

CORTEX² has a number of built-in security and privacy mechanisms:

- Users: CORTEX² handles access control to ensure that each user could only access to the data he is authorized to.
- Data governance: The user produces personal data that is transmitted and stored in CORTEX². CORTEX² handles this private data according to European regulation and policies.
- Streams: CORTEX² ensures the cyphering of media and data streams.

Security and privacy development recommendations:

New CORTEX² components or use-cases: the new CORTEX² components will be directly impacted by data privacy and data security when interacting and exchanging data with other components. Third parties must make sure that the new services:

- do not impair GDPR compliancy
- do not impair CORTEX² access control mechanisms
- ensure integrity and security of all data generated and stored either in CORTEX² framework or outside of CORTEX² framework.

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2.5. Cortex Framework components available for 3rd-party integration

2.5.1. Planned status of the Cortex Framework by end of February 2024

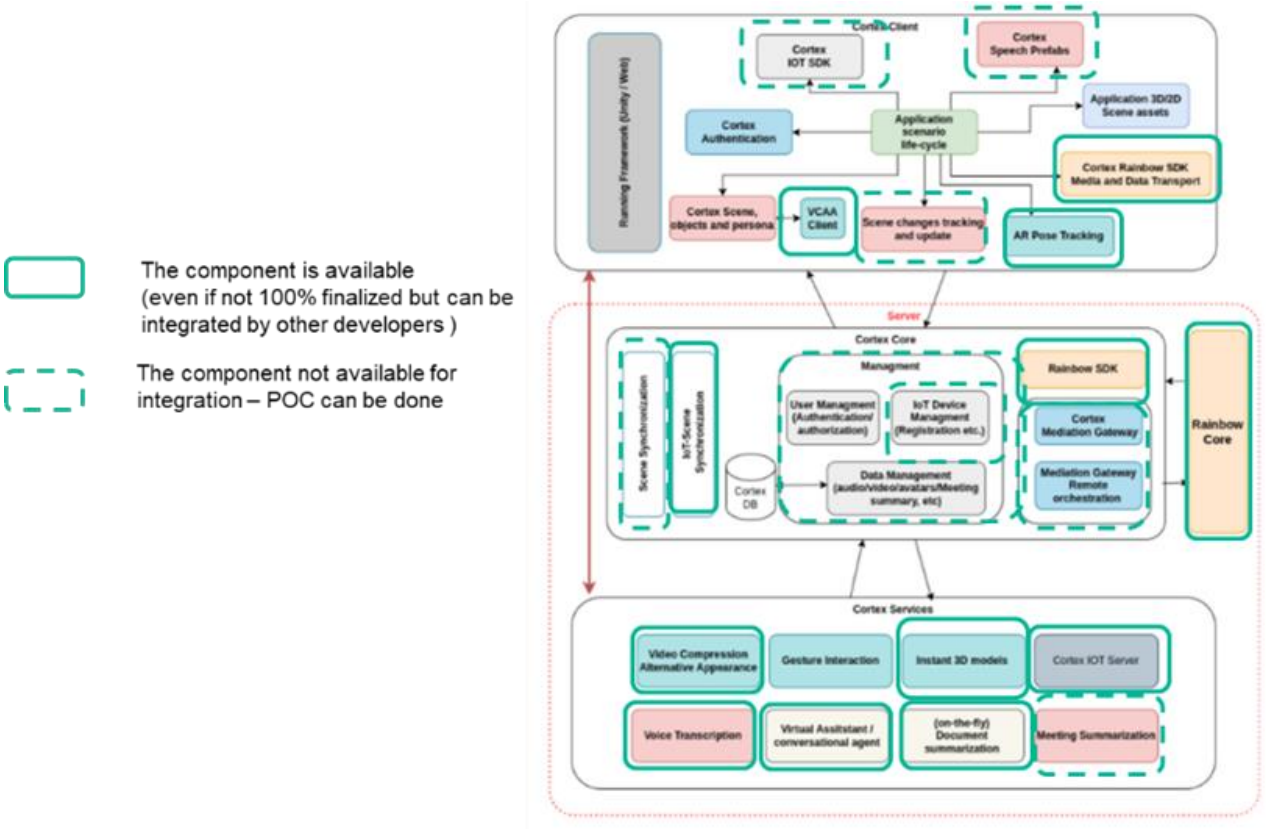

Figure 5: CORTEX² Framework available for OC1 third party integration

- Components and functions
  - Scene synchronisation: use of the Rainbow WebRTC Data channels available in Unity.
  - Rainbow Mediation Gateway: first iteration of orchestration with 3rd-party services. (see below Cortex SDKs)
  - User role management and IoT device management: A keycloack server instance is deployed in Cortex core that can be used by 3rd-parties
  - IoT Scene synchronisation server: This is an interactive bot with uiTOP and it drives the actuation and sensoring subscription. It will use keycloack for device management and configuration of access rights to IoT devices
  - VCAA: The component supports client emitter side and client receiver side, available in Unity as prefabs
  - Voice Transcription - CoVA (Cortex Voice Assistant) - partially available: The component supports Speech to Text, Text to Speech, and Intention recognition + document search within a local repository and summarization
  - Meeting Summarization: Partially available for POC.
  - Gesture interaction: Not available (development will start after the OC1).
  - Instant 3D scene reconstruction: A client server architecture will be available with a Unity module as client, and a server service that reconstructs 3D scenes.

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2.5.2. **Cortex Software Development Kits (SDKs)**

CORTEX² does not provide a single Software Development Kit (SDK), but rather a collection of SDKs that can be used for different purposes in the framework. The CORTEX² framework bases on the Rainbow Videoconferencing system by Alcatel Lucent Enterprise, which has a specific SDK called Rainbow SDK. CORTEX² is providing the developers with a set of SDKs going beyond only Rainbow SDK

For the Rainbow SDK please refer to https://developers.openrainbow.com/. Please note that the WebRTC data channels and the Mediation Gateway (MGW) may not be fully described in this documentation as their development is not completed when issuing the OC2 but it could already provide a lot of information regarding available features and functionalities. For the documentation of the WebRTC data channels and the MGW, you will get support from the CORTEX2 consortium.

Notice, we are targeting 2 different development environments: Unity 3D or Mozilla Hubs. We will rely in the capabilities of each of those environments that are not described here.
The following presents the different SDKs made available to the developers for the use of the CORTEX² framework:

- **Client-Side SDK**
  - Web SDK:
    - Audio, video conferencing …
  - C# SDK:
    - Unity package and sample Unity project showing how to set up the Rainbow Controller aiming at easing the developers' integration of Rainbow.
  - IoT SDK : an abstract layer on top of Rainbow SDK , an implementation of Cortex IoT SDK data models. The structure of the messages exchanged will be described.
  - Tracking SDK: A Unity module and accompanying dll library for 3D object recognition and tracking which allows to track an object in the received remote video
  - VCAA service SDK: integration of the VCAA module for being able to change the video transmitted in the Rainbow conversation

- **Server-Side SDK**
  - Rainbow Node SDK (NodeJs – Javascript): it is used for instance for IoT scene synchronisation bot using Instant Messaging to exchanged structured messages (IoT SDK)
  - Cortex² Virtual Assistant (Rasa SDK): CoVA is based on Rasa Open Source (https://rasa.com/docs/rasa/) and will later on be completed with a dedicated generative AI-based module. Currently, writing a CoVA assistant consists in implementing a Rasa bot by writing dedicated files as described in https://rasa.com/docs/rasa/training-data-format. This is done in a clone of a git repository that will be made available. The agent is then built and deployed using either Docker Compose or Kubernetes.

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- **External services integration through Mediation Gateway**
  - The MGW component will be partially available by the end of Feb 2024 and will be able to route flows. The XR Cortex service uses the Rainbow C# SDK to receive and exchange WebRTC flows.
  - The MGW acts as an orchestrator and, on Service activation request, (Voice Assistant), or according to the scenario, the MGW scripting part will be triggered to activate or route the several WebRTC and chat flows to the right component. Basic scripting capabilities are available and integration use cases can be discussed with applicants.

2.5.3. How to start with developing a Cortex application or a Cortex component

The 3 pilots have instantiated the abstract model described in deliverable D2.1. The Virtual Business meeting use Web technologies and is based on Mozilla Hubs while the 2 other pilots are based on Unity 3D and so use C# programming.

For integrating the contributions developed in the frame of the Open Call 2 the third parties are expected to use or extend the abstract model, and in this case, the 3rd-party should follow the general guidelines of CORTEX² framework development. This will be provided by mentors to guide the 3rd-party partner during the implementation of the project.

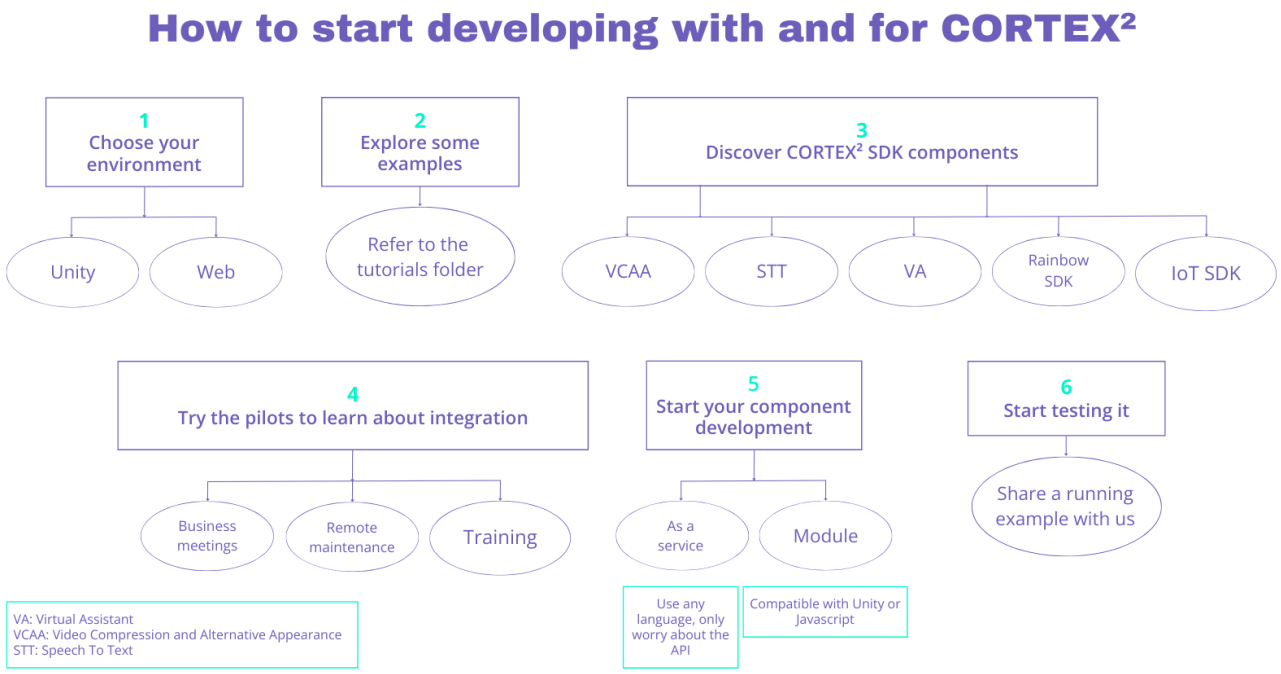

Figure 6: CORTEX² OC1 Co-development process

Documented project samples: To help the 3rd-party partners, several samples highlighting how the consortium integrated the CORTEX² Framework components by using the different SDKs available will be provided.

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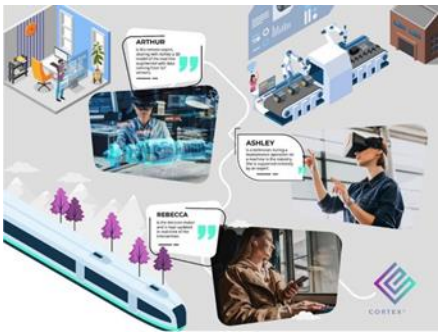
In addition, **3 Pilots MVP** will present what can be achieved thanks to the CORTEX^2 framework.

3. CORTEX^2 Pilots

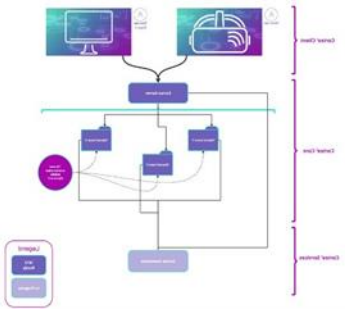
Three use cases, called pilots, are being developed as part of the project. They present the first adopters of CORTEX2 framework, presented above.

3.1. Industrial maintenance

We created the first MVP of a remote maintenance solution involving collaboration through VR and AR technologies.



(a) Scenario of the industrial remote cooperation use case



(b) Use diagramm of the industrial remote cooperation use case

Industrial remote cooperation use case

The industrial remote cooperation use-case pilot utilizes Rainbow functionality and the Unity engine to connect different clients.

In a session, the client supports three different personas:

- The technician
  - Requires remote help for complex machinery
  - Uses a device with a camera or an XR headset
- The expert
  - Joins technician and receives 3D model and tracking information
  - Places annotations to aid understanding of tasks
- The Observer
  - Can join a session

As the process of joining and leaving is completely asynchronous, due to the way that bubbles operate and other factors, such as network availability, the pilot utilizes the Rainbow data channel for a variety of communication tasks between the clients.

The technician uses an internal tracking library from the DFKI based on scans of 3D objects. With this, objects can be tracked with a common webcam. The known model can also be used for additional functionality. The technician will see the 3D annotations created by the expert in

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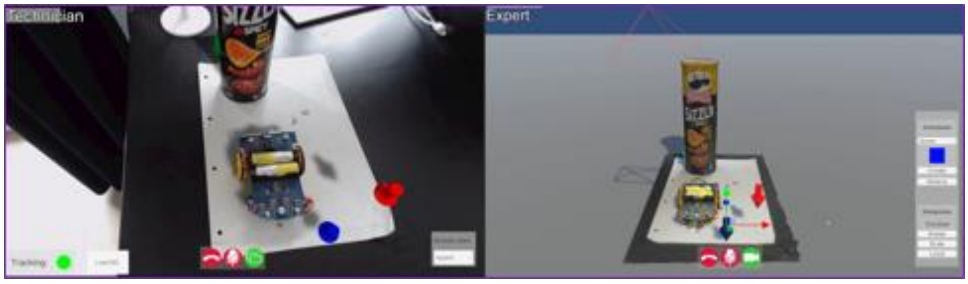
the camera image. Due to the knowledge of the 3D model, these annotations can be accurately occluded by the tracked model in the camera image, as well as cast shadow on each other, Additional background 3D objects can be scanned and added to further recreate the environment. This enhances the spatial understanding of the user. The camera feed of the expert can be shown as an augmentation in the camera image or as a small window. Additionally, observers are shown with either their avatars or their camera feed.
The expert receives tracking information from the technician and shows both the 3D models as well as the position and orientation of the technician. 3D annotations can be placed and manipulated. If shared, the augmented view of the technician can be shown as a video. Observers are shown the same way as on the technician side.
Observers just see roles, participants and shared videos of the expert and technician.



3.2. REMOTE TECHNICAL TRAINING

The Training Platform is developed in Unity and uses OpenXR, an open standard for accessing VR and AR platforms. It consists of a trainee section and a trainer section.
For trainees, the platform is tailored for VR headsets. Initially, trainees enter a solo lobby where they select the course, they wish to participate in. Upon selection, they are seamlessly transported into the designated solo experience assigned by their trainer. Within this immersive environment, trainees can communicate orally with all course participants and interact with objects, such as machine models, in real-time. Their actions and interactions are transmitted to the trainer instantly through Rainbow, ensuring seamless communication and feedback.
Trainees also have the flexibility to switch to the multiplayer lobby, where they can interact with their co-trainees represented as basic avatars. This interaction is made possible through Mirror Networking, a networking solution within Unity that facilitates real-time communication and synchronization between multiple instances of the application running on different devices. In the lobby, there is a screen where the trainer can share their screen or camera.
On the trainer side, the platform allows the trainer to remotely manage the training session from their PC. They can communicate with all trainees in their course and have access to a grid-like view of what each trainee sees. This real-time insight into trainee perspectives enables effective guidance and instruction. Moreover, trainers can dynamically modify the solo experiences assigned to each trainee as needed to tailor the training to individual learning objectives and progress.

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3.3. Business meeting

Business meeting (BM) is a video conferencing application with extend reality. It is made so that users without VR devices can also join the conference and remain interoperable with large consumer solutions. Currently, users can join the VR conference from the classic Rainbow video-conferencing solution or from Business meeting. People joining in video can choose an alternative appearance, while XR users appear as an avatar in the environment.

CORTEX^2 provides several features that are partially integrated into the BM, such as the virtual assistant who listens and intervenes in the meeting on various topics, with document and meeting summarization capabilities to preserve conference time. In addition, BM supports interaction with real-world IOT objects to alert the user about an urgent situation or to enable faster actions. The application is also aimed at detecting VR avatar gestures, so they can be perceived by both VR and non-VR participants. Other components are currently being developed in CORTEX, with the aim of making the most of these advances.

4. CORTEX2 Extended features

Through its Open Calls, CORTEX^2 funds third-party projects to further co-develop and demonstrate CORTEX2 functionalities by integrating additional new use cases. Open Call 1 selected 10 co-development and 10 use-case projects. The current Open Call 2 for co-developers aims to expand CORTEX^2 functionalities with innovative modules and features not addressed in the first call and to enhance the proposed application areas. Below is a list of topics and applications covered by Open Call 1.

Table 1 List of selected projects under OC1 Track 1 Co-development

#	Selected Project	Brief description
1	Enabling support for externalising models in XR collaboration	Advancing and extending the proprietary markerless motion capture (MoCap) technology of MOV, focusing on supporting the fluent, interactive, and immersive remote collaboration between teams. Apart from the capturing step, the envisioned technology will provide identifiable body representations (i.e. personalised avatars) aiming to foster a sense of presence and to provide a more authentic experience, while facilitating dynamic collaboration through an engaging virtual environment.
2	ARY the AR Media	ARY - an AR media will offer the capability to anchor 3D objects, video, picture, double numeric, pdf file, into indoor environment and make those virtual elements available to anyone using a smartphone or other device.
3	Automatic Minute Taking with	At the core of this project are advanced speech-to-text capabilities and Large Language Models (LLMs). In collaboration with ZA Cloud, the project will leverage knowledge and resources to develop a

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	Artificial Intelligence	system that simplifies the meeting process, provides customized and contextually relevant summarization and ensures adaptability across various languages and strict compliance with data security standards.
4	The Infinity Palette	Aims to enrich the Cortex platform with an innovative 2D/3D asset library, optimized for Unity and Mozilla Hubs. A plan to create immersive and adaptable learning environments including a traditional classroom, a group study room, and a library for individual learning, alongside interactive spaces for virtual concerts and cultural exhibitions. These environments, comprising a blend of static and dynamic assets, are designed to be customizable to user needs.
5	Revolutionizing Virtual Spaces: SENSO3D's Comprehensive 3D Object Library	The project envisions the creation of detailed and accurate 3D models for extended reality (XR) applications, with a particular focus on areas such as elder care, language learning, and interactive education. By converting 2D images into immersive 3D environments, SENSO3D enhances visualization and interaction, offering substantial benefits to users, including those with special needs.
6	Co-development of a Dynamic library of personalized gestures	Creating a module capable of accurately capturing and interpreting a wide range of hand gestures. These gestures, once recorded, can be associated with specific semantic interpretations and actions to be used across various AR/VR applications in the CORTEX2 platform.
7	Enhancing Videoconferences with Real-Time IoT Data in agrifood sector	The project targets the integration of advanced IoT technologies within the CORTEX2 framework, focusing on the agri-food industry. Goal is to advance the operational efficiency and user experience in XR applications within this sector through transforming the current fragmented landscape into a more cohesive, efficient, and technologically advanced system.
8	Multiplayer Haptic interactions	Embarking on the development of a multiplayer toolkit, designed to empower XR developers in seamlessly creating interactive virtual environments featuring haptic gloves and hand tracking.
9	VIrtualization Service for Object Reconstruction	Proposes a web service that will take images or a video stream of a small object and generate a digital-twin as a triangular mesh, that can be used by all current XR applications and game engines and

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		be visualised on any device, enabling easy sharing of the 3D model across multiple stakeholders and environments.
10	Realistic Avatars for XR	Developing a scalable, automatic, integrated tool for realistic, customisable, interoperable, multimodal Avatars that will be integrated with the CORTEX² technological ecosystem to extend its capabilities by covering User Representation as well as User Avatar Customization.

5. Concluding remarks

In conclusion, this document serves as an informative resource detailing the architecture of the CORTEX^2 teleconference platform. It complements Annex 1 CORTEX^2 Guidelines for applicants by offering a comprehensive understanding of the fundamental platform functionalities. It is important to note that this document is a complementary resource, enhancing the understanding provided by Annex 1 rather than existing as a standalone document.

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ANNEX 2 – CORTEX² OC2 F6S Application Form

Open Call 2 Co-development
Submission deadline: **15 August 2024, 17:00 CEST**

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I. Abstract

Please note that the question form provided here is intended for reference purposes only!

To submit your application for the call, please complete the appropriate form available on the F6S page.

- Apply here: https://www.f6s.com/cortex2-open-call-2-for-co-developers/apply

II. CORTEX² Open Call 2 for Co-developers Application Form

Proposal form information and documentation

This proposal form has the following mandatory sections:

Section 1: Proposal identification

Section 2: Applicants information

Section 3: Proposal information Section

Section 4: Requirements to join CORTEX² funding programme

Section 5: Additional questions

The following documents MUST be reviewed when preparing your proposal (available at: https://cortex2.eu/open-calls/open-call-2/#documents)

> ANNEX 1- CORTEX² Guideline for Applicants

> ANNEX 1.1- CORTEX² Technical Description

> ANNEX 2 - CORTEX² F6S Application Form (current form)

> ANNEX 2.1 - CORTEX² Proposal Template

> ANNEX 3 - CORTEX² Declaration of Honour

> ANNEX 4 - CORTEX² SME Declaration

> ANNEX 5 - CORTEX² Sub-grant Agreement

[Note: ANNEX 2.1 CORTEX² Proposal Template MUST be completed and uploaded within the form available on the F6S page under question 23]

Please be informed that failure to provide the required information/documentation will result in disqualification.

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Good luck!

I SECTION 1: PROPOSAL IDENTIFICATION I

1. Proposal title*

2. Proposal acronym*

3. Proposal abstract*
   Maximum length 1500 characters (including spaces).

I SECTION 2: APPLICANT INFORMATION I

According to Annex 1 - Guidelines for applicants Open Call 2 will finance single Startup/SME/Research organization applications or a team of maximum two technology developers/providers/integrators.

Please note to justify the role of each organisation, and the capacity in terms of expertise and resources for the selected topic in the ANNEX 2.1 - CORTEX² Proposal Template for co-developers.

In case of a single entity application "Applicant 2" fields should be marked with N/A.

Applicant 1 - Lead

4. A1 - Organisation/Entity name*
   Full legal name of company/organization

5. A1- Type of organisation*
   Please select the type of applicant that best represents your entity.

   Select One:

   - Startup
   - SME
   - Research organisation

6. A1 - VAT number

7. A1 - PIC Number
   If you have a PIC number, please provide it. If you don't have a PIC number you can register for a PIC number here: (ec.europa.eu/info/funding-tenders/opportunities/portal/screen/how-to-participate/participant-register).
   Alternatively indicate N/A

8. A1 - Country*

9. A1 - Website

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Provide a website, if available

10. A1 - Name of main contact person*
    Please, provide the full name of the main contact person

11. A1 - Contact person's role/position in the company/organisation*

12. A1 - Email address*

Applicant 2
In case of a single entity application mark N/A on all A2 questions.

13. A2 - Organisation/Entity name*
    Full legal name of company/organization

14. A2- Type of organisation*
    Please select the type of applicant that best represents your entity.

    Select One:

    - Startup
    - SME
    - Research organization

15. A2 - VAT number

16. A2 - PIC Number
    If you have a PIC number, please provide it. If you don't have a PIC number you can register for a PIC number here: (ec.europa.eu/info/funding-tenders/opportunities/portal/screen/how-to-participate/participant-register).
    Alternatively indicate N/A

17. A2 - Country*

18. A2 - Website
    Provide a website, if available

19. A2 - Name of main contact person*
    Please, provide the full name of the main contact person

20. A2 - Contact person's role/position in the company/organisation*

21. A2 - Email address*

I SECTION 3: PROPOSAL INFORMATION I

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22. To which topic are you applying? *

You can select Only ONE topic*

T1 - Embodied Avatar
T2 - Smart generator
T3 - Virtual Experiences Editor
T4 - MPRR (Multi Person reaction Recognition)
T5 - Gaussian-splatting-based reality capture for VR
T6 - 3D model database
T7 - Real-time voice translation
T8 - Anonymizing meeting's content for privacy-free data storage

23. Upload here pdf of filled in ANNEX 2.1 - CORTEX² Proposal Template for co-developers

The respective Annex is available at: https://cortex2.eu/open-calls/open-call-2/#documents

Before submitting check if you have:
(1) Respected the formatting requirements, including the page limit
(2) Provided information for all the required sections

Proposals using another template will be disqualified. Any pages exceeding the defined limit will not be evaluated. Failure to meet the requirements will lead to proposal disqualification. (Max file size 30MB.)

Choose a File

I SECTION 4: REQUIREMENTS TO JOIN CORTEX² FUNDING PROGRAMME I

24. I accept all conditions of CORTEX² Open Call #2*

The conditions and all relevant documents to participate in CORTEX² Open Call #2 are available at: https://cortex2.eu/open-calls/open-call-2/. By selecting "YES" you agree to the conditions described therein.

YES

25. DECLARATION OF HONOUR: I CONFIRM that I accept all conditions in ANNEX 3 - CORTEX² Declaration of Honour and information contained therein and that it will be provided signed and stamped should this proposal be accepted for funding.*

YES

26. SME DECLARATION (For SMEs): I confirm that the company I represent is a valid SME, following established EU rules, which validity will be proved by a signed and stamped declaration to be provided should this proposal be accepted for funding*.

YES

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27. I CONFIRM that all information provided in this proposal is true and correct.*

YES

28. I ACCEPT that the information provided and submitted in this proposal can be shared by F6S with the CORTEX consortium and appointed external evaluators for the purposes of managing the open call.*

YES

I SECTION 5: ADDITIONAL QUESTIONS I

29. How did you hear about CORTEX² Open Call #2?

- CORTEX² website
- F6S
- CORTEX² social media
- LinkedIn
- EC communications
- Acquaintance
- Others

30. I am interested in being contacted about future funding opportunities*

YES
NO

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement N°101070192

ANNEX 2.1 OC2 Proposal Template Co-development

Open Call 2: Co-development
Submission deadline: **15 August 2024, 17:00 CEST**

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement nº 101070192. This document reflects only the author's view, and the EU Commission is not responsible for any use that may be made of the information it contains.

Contents

List of Tables

INSTRUCTIONS

CORTEX^2 – Open Call 2: **Co-development**

Please use this template to prepare your proposal for CORTEX^2 OC2 application. **The structure of this template MUST be followed when preparing your proposal.** Applicants using other kind of template/ document structure will be automatically ineligible.

Disclaimer: *Please be aware that the proposal will be evaluated as it was submitted, with no additional documents or links to add information beyond the defined hereby.* The proposal is a self-contained document. Evaluators will be instructed to ignore hyperlinks to information that is specifically designed to expand the proposal, thus circumventing the page limit.
Before submitting your application, you **MUST read the Guidelines for Applicants** to clearly understand the rules applying to the call. It is available at: https://cortex2.eu/open-calls/open-call-2/#documents
This template has been organised to ensure that the important aspects of your planned work are clearly measurable with respect to the evaluation criteria, which are:

- Technical Excellence
- Ambition & Impact
- Team Skills & Expertise
- Project Planning & Value for Money

Rules:

- The page limit for full proposal is **15 pages** (including cover page, table of content page and the Ethical/Security Checklist). All tables, figures, references and any other element pertaining to these sections must be included as an integral part of these sections.
- The allowed font type is "**Calibri** "and the minimum **font size is 11** points.
- It is mandatory to save the document in PDF before uploading.
- If you attempt to upload a proposal longer than the specified limit, your proposal may not be taken into consideration by the evaluators.
- **ENGLISH is the only eligible language of the proposal.**

Tips:

- Please take advantage of the different communication instruments offered by the CORTEX^2 Consortium (i.e. info webinars, online Q&A, and FAQ section in the website) to receive feedback on any questions you may have before submitting your proposal.
- It is in your interest to **keep your text as concise** as possible, since evaluators rarely view unnecessarily long proposals in a positive light.

!!!! Please delete this page when submitting the proposal !!!

!!! Delete the* guidance text in blue *in each section !!!

CORTEX^2 Open Call #2

Co-development

A call for a single SME/Startup/Research organisation or maximum two SMEs/Startups/Research organisations forming a consortium.

Acronym of your proposal

Full title of your proposal

Indicate the topic you are applying for (**delete the unnecessary ones**)

Topic#	Name of the Topic
1	Embodied Avatar
2	Smart generator
3	Virtual Experiences Editor
4	MPRR (Multi Person reaction Recognition)
5	Gaussian-splatting-based reality capture for VR
6	3D model database
7	Real-time voice translation
8	Anonymizing meeting's content for privacy-free data storage
9	Open Topic

Eligible Partner (1) lead Name, Last name, position in the organisation	**Eligible Partner (2) lead** Name, Last name, position in the organisation please remove this column if only 1 organisation applies
Short Name of Organisation	Short Name of Organisation
E-mail	Email
Logo, if applicable	Logo, if applicable
Website	Website

Date of submission:

Country/city

1. OVERVIEW OF THE PROPOSAL (1 PAGE)

1.1. Objective(s)

Please state a clear objective/ a set of objectives of your intended work for the 9 month co-development programme.

Text style to be used

1.2. Executive summary

Describe an overview of your intended proposed work. What will be developed, why is it important, who will be involved, challenges to address, objectives to meet, expected outcome and potential impact.

Text style to be used

2. TECHNICAL EXCELLENCE (3 PAGES)

2.1. Current scenario

-Describe the challenging/problematic scenario to be addressed by your project, explaining the how does the current situation looks like, what are the limitations. Identify the technical challenges and barriers. Whenever possible quantify the aspects involved.
-Alignment with the CORTEX^2 challenges and vision.
Text style to be used

2.2. Envisioned scenario

Explain the adopted technology and comparison with state-of-the-art.
You can indicate:
- How will the solution approach the selected Topic /Open Topic?
- Your previous experience with this solution?
- Technical plan to achieve required TRL, technical milestones (you can include them in Table 3)
- Describe how research data will be managed.
- Alignment with the CORTEX^2 objectives.

Text style to be used

2.3. Technical approach

-Describe how you will reach the envisioned scenario.
-Describe your technical approach including the identification of the platforms/technologies required to be integrated/developed, the applicable standards to be used and/or updated, data to be captured for decision support systems, validation methodologies
-Identify the CORTEX^2 technical components/framework to be used (check Annex 1.1 from the Open Call documents).

Text style to be used

2.4. Visual description

-Include a scheme(s)/image(s)/figure(s) supporting the description of your technical work to be performed.

3. AMBITION & IMPACT (2 PAGES)

3.1. Expected benefits

- What will change thanks to your solution?
- What are the longer-term goals and how this first successful proof-of-concept will lead to there?

- Describe expected benefits for your organisation(s) partners, CORTEX^2, and other stakeholders involved if relevant.

-Justify your project outcomes (which should be clear, measurable, and realistic) and how they will generate added-value with respect to CORTEX^2 vision and objectives.

-Define the potential socio-economic impact of your solution

Text style to be used

3.2. KPIs

Table 1 - Contribution to CORTEX² KPIs.

Contribution to CORTEX² KPIs	
KPI name (take it from the specific KPIs defined by each topic in the Guidelines for Applicants. In case of the Open Topic Application please propose a set of relevant KPIs)	**Value** at the end of implementation

Add rows as needed

You can add more KPIs at the submission stage, nevertheless, please remember that additional KPIs to measure your project's success can be also agreed at the 1st Sprint on the programme between the beneficiary and the CORTEX2 Consortium.

3.3. Gender approach/accessibility/inclusion

- Describe the potential of your proposed solution regarding these aspects.

Text style to be used

4. TEAM SKILLS & EXPERTISE (1 PAGE)

Summarise the team involved in the project in the table below. Notice that the people included in the proposal should be later involved in the execution.

Table 2 - Proposed Team.

Entity	Name of the person	Role in the project	Link to LinkedIn profile or equivalent	Gender

Add lines as required

Below please provide a short summary of the relevant experience of each team member. When relevant Include previous project references relevant to the proposal, products, publications, participation in conferences, collaborations, community projects, etc.

Describe #1 SME/Startup/Research organisation - leader
Please describe the competences of the company and in particular the team which will realise the results. Include:

- Company profile and main expertise/products/services if relevant,
- Business and technical competences and
- Competences adequate to the expected role
- Participating team members competences/ skills

Describe #2 SME/Startup/ Research organisation (in case of a consortium)
Please describe the role of the healthcare entity involved and the team of experts that will represent this partner. Include:

- Company profile and main expertise/products/services if relevant,
- Business and technical competences and
- Competences adequate to the expected role
- Participating team members competences/ skills

- In case of two organisations explain the value of fusion as a consortium and how you will be structured as a sole team
- Identify synergies, trans-disciplinary competences, cross-border dimension if exists.

Text style to be used

5. PROJECT PLANNING & VALUE FOR MONEY (3 PAGES)

5.1. Planning

Describe the activities that will take place in your project from the technical point of view. Break down your work into each of the 3 sprints (1-DEVELOPMENT; 2-INTEGRATION; 3-VALIDATION), list tasks and provide timing of the different activities and components. This section should answer the question "how are we going to implement the project to reach the defined objectives?"

Table 3 - Project plan.

Description: **The main aim of this work....**
1. WORKPLAN 1st Sprint – DEVELOPMENT (3-months) **Task 1.1 name & period of execution M=month (Mx-Mx)** **Clear objective of the task** **Clear description of the task** **Clear contribution to the task of the organisation(s)** **Expected outcome(s)** **Task 1.2 name & period of execution (Mx-Mx)** **Clear objective of the task** **Clear description of the task** **Clear contribution to the task of the organisation(s)Expected outcome(s)** **Task 1.3 name & period of execution (Mx-Mx)** (if applicable) **Clear objective of the task** **Clear description of the task** **Clear contribution to the task of the organisation(s)** **Expected outcome(s)** *SPRINT 1* ***Deliverable proposal required ONLY for Open Topic*** *(deliverables per each Topic are defined in the Guidelines for Applicants)*:
Impact and Outputs of the 1st Sprint **List main Milestones:**
2. WORKPLAN 2nd Sprint – INTEGRATION (3 months) **Task 2.1 name & period of execution (Mx-Mx)** **Clear objective of the task** **Clear description of the task** **Clear contribution to the task of the organisation(s)**

Expected outcome(s)

Task 2.2 name & period of execution (Mx-Mx)

Clear objective of the task

Clear description of the task

Clear contribution to the task of the organisation(s)

Expected outcome(s)

Task 2.3 name & period of execution (Mx-Mx) (if applicable)

Clear objective of the task

Clear description of the task

Clear contribution to the task of the organisation(s)

Expected outcome(s)

SPRINT 2 ***Deliverable proposal required ONLY for Open Topic*** *(deliverables per each Topic are defined in the Guidelines for Applicants)****:***

Impact and Outputs of the 2nd Sprint

List main Milestones:

3. WORKPLAN 3rd Sprint - VALIDATION

Task 3.1 name & period of execution (Mx-Mx)

Clear objective of the task

Clear description of the task

Clear contribution to the task of the organisation(s)

Expected outcome(s)

Task 3.2 name & period of execution (Mx-Mx)

Clear objective of the task

Clear description of the task

Clear contribution to the task of the organisation(s)

Expected outcome(s)

Task 3.3 name & period of execution (Mx-Mx) (if applicable)

Clear objective of the task

Clear description of the task

Clear contribution to the task of the organisation(s)

Expected outcome(s)

*SPRINT 3 **Deliverable proposal required ONLY for Open Topic** (deliverables per each Topic are defined in the Guidelines for Applicants):*
Impact and Outputs of the 3rd Sprint **List main Milestones:**

5.2. Value for money

Please indicate the number of person-months (full-time equivalent) of people involved in the project in the table below for the 9 months of project:

Table 4 - Person-month & Personnel costs.

Entity	Name of the person	Person-month (PM)	Monthly rate in Euros (MR) (Actual cost only)	Direct personnel costs (PMxMR)
Total				

Add lines as needed

Provide a description of expected costs and the requested total contribution using the table. Write only the costs that will be funded by the CORTEX2 project. **Do NOT include any cost that will be covered by your own resources or other means.**

Notice that a PM is a metric for expressing the effort of a person dedicated full time in one month.

Table 5 - Total budget.

Item	Amount (€)		
	Entity 1	Entity 2 (if applicable)	Total
Direct personnel costs (a)			
Other direct cost (Equipment) (b) **(Depreciation cost only)**			
Other direct cost (Software licenses) (c)			
Other direct cost (Travel expenses) (d)			

Other direct cost (Others) (e)			
Indirect costs (0,25 x (a +b +c +d+e))			
Total			

The maximum amount of funding that an **application** may receive from CORTEX[2] is up to 100.000 EUROs via any mean.

Note: subcontracting is not recommended and can be considered ONLY if minor (less than 15%) with strong justifications and alignment to the tasks. The funded parties are expected to have the core skills to successfully deliver the project.

Applications with a total budget of more than 100.000 EUR are NOT eligible and will be discarded without further evaluation.

ANNEX: Ethics Self-Assessment

ETHICAL ISSUES TABLE – CHECKLIST to be completed

	YES/NO
Informed Consent	
• Does the proposal involve children?	
• Does the proposal involve patients or persons not able to give consent?	
• Does the proposal involve adult healthy volunteers?	
• Does the proposal involve Human Genetic Material?	
• Does the proposal involve Human biological samples?	
• Does the proposal involve Human data collection?	
Research on Human embryo/foetus	
• Does the proposal involve Human Embryos?	
• Does the proposal involve Human Foetal Tissue / Cells?	
• Does the proposal involve Human Embryonic Stem Cells?	
Privacy	
• Does the proposal involve processing of genetic information or personal data (e.g. health, sexual lifestyle, ethnicity, political opinion, religious or philosophical conviction)	
• Does the proposal involve tracking the location or observation of people?	
Research on Animals	
• Does the proposal involve research on animals?	
• Are those animals transgenic small laboratory animals?	
• Are those animals transgenic farm animals?	
• Are those animals cloned farm animals?	
• Are those animals nonhuman primates?	
Research Involving Developing Countries	
• Use of local resources (genetic, animal, plant etc)	
• Benefit to local community (capacity building i.e. access to healthcare, education etc)	
Dual Use	
• Research having direct military application	
• Research having the potential for terrorist abuse	
ICT Implants	
• Does the proposal involve clinical trials of ICT implants?	
I CONFIRM THAT NONE OF THE ABOVE ISSUES APPLY TO MY PROPOSAL	

Ethics

If you have entered any ethics issues in the ethical issue table, you must, ONLY once selected as a winner, so NOT in the submission stage:

- submit an ethics self-assessment, which:
  - describes how the proposal meets the national legal and ethical requirements of the country or countries where the tasks raising ethical issues are to be carried out;
  - explains in detail how you intend to address the issues in the ethical issues table, in particular as regards:
    - research objectives (e.g. study of vulnerable populations, dual use, etc.)
    - research methodology (e.g. clinical trials, involvement of children and related consent procedures, protection of any data collected, etc.)
    - the potential impact of the research (e.g. dual use issues, environmental damage, stigmatization of particular social groups, political or financial retaliation, benefit-sharing, malevolent use, etc.).
- provide the documents that you need under national law (if you already have them), e.g.:
  - an ethics committee opinion;
  - the document notifying activities raising ethical issues or authorizing such activities

  ⚠ *If these documents are not in English, you must also submit an English summary of them (containing, if available, the conclusions of the committee or authority concerned).*

  ⚠ *If you plan to request these documents specifically for the project you are proposing, your request must contain .*

Security

Please indicate if your project will involve:

- Activities or results raising security issues:_____(YES/NO)
- 'EU-classified information' as background or results: _____(YES/NO)
- Any potential “dual use” of results: _____(YES/NO)

CORTEX²

ANNEX 3 Declaration of Honour

Open Call 2: To submit ONLY once selected.
Submission deadline: **15 August 2024, 17:00 CEST**

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Beneficiary/Consortium Declaration of Honour

[remove "Beneficiary" if two entities apply to the Call; remove "Consortium" if only one entity applies to the Call]

Proposal Title: _____
Proposal Acronym: _____

BETWEEN *[remove "BETWEEN" if only one entity applies to the Call]*
_____ [Company/ organisation name] established in _____, [Official address], VAT number _____, represented for the purposes of signing and submitting the proposal and the Declaration of Honour by _____ [Name of legal representative];

AND [remove the below block if only one entity applies to the Call]

_____ [Company/ organisation name] established in _____, [Official address], VAT number _____, represented for the purposes of signing and submitting the proposal and the Declaration of Honour by _____ [Name of legal representative];

CONSORTIUM SECTION

In case you apply as 2 entities – CONSORTIUM you must fill out the section below.

In case you apply as 1 entity – BENEFICIARY you must remove this section and move to the BENEFICIARY SECTION on page 7.

It is hereby agreed that:

- All information provided is true and legally binding.
- Entity 1 _____ [leader name] is acting on behalf the following partner(s) as the consortium leader:
    - Entity 2: _____ [Company/ organisation name]

    [*remove block below – Partner 3 – and this text if only two entities participate in the consortium*]
- The consortium entities have agreed on their roles and budget shares.
- The consortium leader is solely responsible for distributing the budget shares to the other consortium partners in accordance with this Consortium Declaration of Honour.
- The CORTEX^2 consortium bears no responsibility in case a partner of this project consortium violates the mutual agreement set in this Consortium Declaration of Honour.
- The CORTEX^2 consortium bears no responsibility in the case of dispute among consortium partners regarding intellectual property rights.
- By signing this Consortium Declaration of Honour, all consortium partners declare that any entity, applying as part of a consortium, may only be funded for one project.

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- By signing this Consortium Declaration of Honour, all consortium partners declare that they are not members of CORTEX^2.
- By signing and submitting this Consortium Declaration of Honour, the consortium partners accept all the rules explained in CORTEX^2 Annex 1: Guidelines for Applicants.
- All partners declare not being in one of the following situations:
    a) it is bankrupt or being wound up, is having its affairs administered by the courts, has entered into an arrangement with creditors, has suspended business activities, is the subject of proceedings concerning those matters, or is in any analogous situation arising from a similar procedure provided for in national legislation or regulations;
    b) it or persons having powers of representation, decision making or control over it have been convicted of an offence concerning their professional conduct by a judgment which has the force of res judicata;
    c) it has been guilty of grave professional misconduct proven by any means which the contracting authority can justify including by decisions of the European Investment Bank and international organizations;
    d) it is not in compliance with its obligations relating to the payment of social security contributions or the payment of taxes in accordance with the legal provisions of the country in which it is established or with those of the country of the contracting authority or those of the country where the contract is to be performed;
    e) it or persons having powers of representation, decision making or control over it have been the subject of a judgment which has the force of res judicata for fraud, corruption, involvement in a criminal organization or any other illegal activity, where such illegal activity is detrimental to the Union's financial interests;
    f) is subject to an administrative penalty for being guilty of misrepresenting the information required by the contracting authority as a condition of participation in a grant award procedure or another procurement procedure or failing to supply this information or having been declared to be in serious breach of its obligations under contracts or grants covered by the Union's budget.
- Each partner declares that:
    g) is not subject to a conflict of interest;
    h) has not made false declarations in supplying the information required as a condition of participation in the CORTEX^2 Open Call 2;
    i) is not in one of the situations of exclusion, referred to in the abovementioned points a) to f).
    j) Is aware and fully accepts all CORTEX^2 conditions and rules as expressed in CORTEX^2 Open Call documents.
- Each partner certifies that:
    - is committed to participate in the abovementioned project;
    - has stable and sufficient sources of funding to maintain its activity throughout its participation in the above-mentioned project and to provide any counterpart funding necessary;
    - has or will have the necessary resources as and when needed to carry out its involvement in the above-mentioned project.

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- **Consortium leader (Entity 1)**

Company/organisation name	
Full address	
Country	
Name of legal representative	
Position in the company/organisation	
Project budget share	_____ EUR
I have the power of legally binding the abovementioned company/organisation on submitting this proposal	
Legal representative signature and stamp (stamp if applicable)	
Done at (place)_____ The (day)_____ (month)_____(year)_____	

- **Consortium partner no. 2 (Entity 2)**

Company/organisation name	
Full address	
Country	
Name of legal representative	
Position in the company/organisation	
Project budget share	_____ EUR
I have the power of legally binding the abovementioned company/organisation on submitting this proposal	
Legal representative signature and stamp (stamp if applicable)	
Done at (place)_____ The (day)_____ (month)_____(year)_____	

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement N°101070192

BENEFICIARY SECTION

*In case you apply as 1 entity – BENEFICIARY you **MUST** fill out the below section.*

In case you apply as 2 entities – CONSORTIUM you must remove this section and move to the CONSORTIUM SECTION on page 4.

It is hereby agreed that:

- All information provided is true and legally binding.
- By signing this Beneficiary Declaration of Honour, the Beneficiary declares that it is not a member of CORTEX^2.
- By signing and submitting this Beneficiary Declaration of Honour, the Beneficiary accepts all the rules explained in CORTEX^2 Annex 1: Guidelines for Applicants.
- The Beneficiary declares not being in one of the following situations:
    k) it is bankrupt or being wound up, is having its affairs administered by the courts, has entered into an arrangement with creditors, has suspended business activities, is the subject of proceedings concerning those matters, or is in any analogous situation arising from a similar procedure provided for in national legislation or regulations;
    l) it or persons having powers of representation, decision making or control over it have been convicted of an offence concerning their professional conduct by a judgment which has the force of res judicata;
    m) it has been guilty of grave professional misconduct proven by any means which the contracting authority can justify including by decisions of the European Investment Bank and international organizations;
    n) it is not in compliance with its obligations relating to the payment of social security contributions or the payment of taxes in accordance with the legal provisions of the country in which it is established or with those of the country of the contracting authority or those of the country where the contract is to be performed;
    o) it or persons having powers of representation, decision making or control over it have been the subject of a judgment which has the force of res judicata for fraud, corruption, involvement in a criminal organization or any other illegal activity, where such illegal activity is detrimental to the Union's financial interests;
    p) is subject to an administrative penalty for being guilty of misrepresenting the information required by the contracting authority as a condition of participation in a grant award procedure or another procurement procedure or failing to supply this information or having been declared to be in serious breach of its obligations under contracts or grants covered by the Union's budget.
- The Beneficiary declares that:
    q) is not subject to a conflict of interest;
    r) has not made false declarations in supplying the information required as a condition of participation in the CORTEX^2 Open Call 2;
    s) is not in one of the situations of exclusion, referred to in the abovementioned points a) to f).

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t) Is aware and fully accepts all CORTEX^2 conditions and rules as expressed in CORTEX^2 Open Call documents.

- The Beneficiary certifies that:
  - is committed to participate in the abovementioned project;
  - has stable and sufficient sources of funding to maintain its activity throughout its participation in the above-mentioned project and to provide any counterpart funding necessary;
  - has or will have the necessary resources as and when needed to carry out its involvement in the above-mentioned project.

Company/organisation name (Beneficiary)	
Full address	
Country	
Name of legal representative	
Position in the company/organisation	
Project budget share	_____ EUR
I have the power of legally binding the abovementioned company/organisation on submitting this proposal	
Legal representative signature and stamp (stamp if applicable)	
Done at (place)_____ The (day)_____ (month)_____(year)_____	

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CORTEX²

ANNEX 4
SME Declaration

Open Call 2: to be submit ONLY once selected.
Submission deadline: **15 August 2024, 17:00 CEST**

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SME Declaration
(information on the SME qualification)

Precise identification of the applicant enterprise

Name or Business name .....

Address (of registered office) .....

Registration / VAT number .....

Names and titles of the principal director(s).....

Type of enterprise (see explanatory note)

Tick to indicate which case(s) applies to the applicant enterprise:

☐ Autonomous enterprise	In this case the data filled in the box below result from the accounts of the applicant enterprise only. Fill in the declaration only, without annex.
☐ Partner enterprise ☐ Linked enterprise	Fill in and attach the annex (and any additional sheets), then complete the declaration by copying the results of the calculations into the box below.

Data used to determine the category of enterprise

Calculated according to Article 6 of the Annex to the Commission Recommendation 2003/361/EC on the SME definition.

Reference period (*)		
Headcount (AWU)	Annual turnover (**)	Balance sheet total (**)

(*) All data must be relating to the last approved accounting period and calculated on an annual basis. In the case of newly-established enterprises whose accounts have not yet been approved, the data to apply shall be derived from a reliable estimate made in the course of the financial year

(**) EUR 1 000.

Important:

Compared to the previous accounting period there is a change regarding the data, which could result in a change of category of the applicant enterprise (micro, small, medium-sized or big enterprise).

☐ **No**

☐ **Yes** (in this case fill in and attach a declaration regarding the previous accounting period).

Signature

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Name and position of the signatory, being authorised to represent the enterprise: .....
.....

I declare on my honour the accuracy of this declaration and of any annexes thereto.

Done at .....

Signature

EXPLANATORY NOTE ON THE TYPES OF ENTERPRISES TAKEN INTO ACCOUNT FOR CALCULATING THE HEADCOUNT AND THE FINANCIAL AMOUNTS

I. TYPES OF ENTERPRISES

The definition of an SME[1] distinguishes three types of enterprise, according to their relationship with other enterprises in terms of holdings of capital or voting rights or the right to exercise a dominant influence[2].

Type 1: Autonomous Enterprise

This is by far the most common type of enterprise.

It applies to all enterprises which are not one of the two other types of enterprise (partner or linked).

An applicant enterprise is autonomous if it:

- does not have a holding of 25%[3] or more in any other enterprise,
- and is not 25%[3] or more owned by any enterprise or public body or jointly by several linked enterprises or public bodies, apart from some exceptions[4],
- and does not draw up consolidated accounts and is not included in the accounts of an enterprise which draws up consolidated accounts and is thus not a linked enterprise[5].

[1] Henceforth in the text, the term "Definition" refers to the Annex to Commission Recommendation 2003/361/EC on the definition of SMEs.

[2] Definition, Article 3

[3] In terms of the share of the capital or voting rights, whichever is higher is applied. To this percentage should be added the holding in that same enterprise of each enterprise, which is linked to the holding company (Definition, Article 3 paragraph 2)

[4] An enterprise may continue being considered as autonomous when this 25% threshold is reached or exceeded, if that percentage is held by the following categories of investors (provided that those are not linked with the applicant enterprise):

a) public investment corporations, venture capital companies, individuals or groups of individuals with a regular venture capital investment activity who invest equity capital in unquoted businesses ("business angels"), provided the total investment of those business angels in the same enterprise is less than EUR 1 250 000,
b) universities or non-profit research centres,
c) institutional investors, including regional development funds,
d) autonomous local authorities with an annual budget of less than EUR 10 million and less than 5000 inhabitants.

(Definition, Article 3 paragraph 2, second sub-paragraph)

[5] - If the registered office of the enterprise is situated in a Member State which has provided for an exception to the requirement to draw up such accounts pursuant to the Seventh Council Directive 83/349/EEC of 13 June 1983, the enterprise should nevertheless check specifically whether it does not meet one or other of the conditions laid down in Article 3 paragraph 3 of the Definition.

- There are also some very rare cases in which an enterprise may be considered linked to another enterprise through a person or a group of natural persons acting jointly (Definition, Article 3 paragraph 3).

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Type 2: Partner Enterprise

This type represents the situation of enterprises which establish major financial partnerships with other enterprises, without the one exercising effective direct or indirect control over the other. Partners are enterprises which are not autonomous, but which are not linked to one another.

The applicant enterprise is a partner of another enterprise if:

- it has a holding or voting rights equal to or greater than 25% in the other enterprise, or the other enterprise has a holding or voting rights equal to or greater than 25% in the applicant enterprise,
- the enterprises are not linked enterprises within the meaning defined below, which means, among other things, that the voting rights of one in the other do not exceed 50%,
- and the applicant enterprise does not draw up consolidated accounts which include the other enterprise by consolidation, and is not included by consolidation in the accounts of the other enterprise or of an enterprise linked to it[5].

Type 3: Linked Enterprise

This type corresponds to the economic situation of enterprises which form a group through the direct or indirect control of the majority of the voting rights (including through agreements or, in certain cases, through natural persons as shareholders), or through the ability to exercise a dominant influence on an enterprise. Such cases are thus less frequent than the two preceding types.

In order to avoid difficulties of interpretation for enterprises, the Commission has defined this type of enterprise by taking over – wherever they are suitable for the purposes of the Definition – the conditions set out in Article 1 of Council Directive 83/349/EEC on consolidated accounts[6], which has been applied for many years.

An enterprise thus generally knows immediately that it is linked, since it is already required under that Directive to draw up consolidated accounts or is included by consolidation in the accounts of an enterprise which is required to draw up such consolidated accounts.

The only two cases, which are however not very frequent, in which an enterprise can be considered linked although it is not already required to draw up consolidated accounts, are described in the first two indents of endnote 5 of this explanatory note. In those cases, the enterprise should check whether it meets one or other of the conditions set out in Article 3 paragraph 3 of the Definition.

- Conversely, there are very few cases of enterprises drawing up consolidated accounts voluntarily, without being required to do so under the Seventh Directive. In that case, the enterprise is not necessarily linked and can consider itself only a partner.
To determine whether the enterprise is linked or not, in each of the three situations it should be checked whether or not the enterprise meets one or other of the conditions laid down in Article 3 paragraph 3 of the Definition, where applicable through a natural person or group of natural persons acting jointly.

[6] Seventh Council Directive 83/349/EEC of 13 June 1983, based on Article 54(3)(g) of the Treaty and concerning consolidated accounts (OJ L 193, 18/7/1983, p. 1), as last amended by Directive 2001/65/EC of the European Parliament and of the Council (OJ L 283, 27/10/01, p. 28).

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II. THE HEADCOUNT AND THE ANNUAL WORK UNITS[7]

The headcount of an enterprise corresponds to the number of annual work units (AWU).

Who is included in the headcount?

- The employees of the applicant enterprise,
- persons working for the enterprise being subordinate to it and considered to be employees under national law,
- owner-managers,
- partners engaging in a regular activity in the enterprise and benefiting from financial advantages from the enterprise.

Apprentices or students engaged in vocational training with an apprenticeship or vocational training contract are not taken into account in the headcount.

How is the headcount calculated?

One AWU corresponds to one person who worked full-time in the enterprise in question or on its behalf during the entire reference year. The headcount is expressed in AWUs.

The work of persons, who did not work the entire year, or who worked part-time - regardless of its duration - and seasonal work is counted as fractions of AWU.

The duration of maternity or parental leaves is not counted.

ANNEX TO THE DECLARATION CALCULATION FOR THE PARTNER OR LINKED TYPE OF ENTREPRISE

Annexes to be enclosed if necessary

- Annex A if the applicant enterprise has at least one partner enterprise (and any additional sheets)
- Annex B if the applicant enterprise has at least one linked enterprise (and any additional sheets)

Calculation for the partner or linked type of enterprise[8] (see explanatory note)

Reference period[9]:

	Headcount (AWU)	Annual turnover (*)	Balance sheet total (*)

[7] Definition, Article 5.
[8] Definition, Article 6 paragraphs 2 and 3
[9] All data must be relating to the last approved accounting period and calculated on an annual basis. In the case of newly-established enterprises whose accounts have not yet been approved, the data to apply shall be derived from a reliable estimate made in the course of the financial year (Definition, Article 4).

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1. Data[9] of the applicant enterprise or consolidated accounts (copy data from box B(1) in annex B[10])			
2. Proportionally aggregated data[9] of all partner enterprises (if any) (copy data from box A in annex A)			
3. Added up data[9] of all linked enterprises (if any) – if not included by consolidation in line 1 (copy data from box B(2) in annex B)			
Total			
(*) EUR 1 000.			

The data entered in the "Total" row of the above table should be entered in the box “Data used to determine the category of enterprise” in the declaration.

[10] The data of the enterprise, including the headcount, are determined on the basis of the accounts and other data of the enterprise or, where they exist, the consolidated accounts of the enterprise, or the consolidated accounts in which the enterprise is included through consolidation.

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ANNEX A

Partner enterprises

For each enterprise for which a 'partnership sheet' has been completed (one sheet for each partner enterprise of the applicant enterprise and for any partner enterprises of any linked enterprise, of which the data is not yet included in the consolidated accounts of that linked enterprise), the data in the 'partnership box' in question should be entered in the summary table below:

BOX A

Partner enterprise (name / identification)	**Headcount (AWU)**	**Annual turnover (*)**	**Balance sheet total (*)**
1.			
2.			
3.			
4.			
5.			
6.			
7.			
Total			

(*) EUR 1 000.

(attach sheets or expand the present table, if necessary)

Reminder:

This data is the result of a proportional calculation done on the 'partnership sheet' for each direct or indirect partner enterprise.

The data entered in the "Total" row of the above table should be entered in line 2 (regarding partner enterprises) of the table in the Annex to the declaration.

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PARTNERSHIP SHEET

1. Precise identification of the applicant enterprise

Name or Business name.....

Address (of registered office) .....

Registration/VAT number[11] .....

Names and titles of the principal director(s)[12] .....

2. Raw data regarding that partner enterprise

Reference period			
	Headcount (AWU)	**Annual turnover (*)**	**Balance sheet total (*)**
Raw data			
(*) EUR 1 000.			

Reminder: These raw data are derived from the accounts and other data of the partner enterprise, consolidated if they exist. To them are added 100% of the data of enterprises which are linked to this partner enterprise, unless the accounts data of those linked enterprises are already included through consolidation in the accounts of the partner enterprise[13]. If necessary, add "linkage sheets" for the enterprises which are not yet included through consolidation.

3. Proportional calculation

a) Indicate precisely the holding[14] of the enterprise drawing up the declaration (or of the linked enterprise via which the relation to the partner enterprise is established) in the partner enterprise to which this sheet relates:

.....

.....

Indicate also the holding of the partner enterprise to which this sheet relates in the enterprise drawing up the declaration (or in the linked enterprise):

.....

.....

b) The higher of these two holding percentages should be applied to the raw data entered in the previous box. The results of this proportional calculation should be given in the following table:

'Partnership box'

Percentage:	**Headcount (AWU)**	**Annual turnover (*)**	**Balance sheet total (*)**

[11] To be determined by the Member State according to its needs
[12] Chairman (CEO), Director-General or equivalent.
[13] Definition, Article 6 paragraph 3, first sub-paragraph
[14] In terms of the share of the capital or voting rights, whichever is higher. To this holding should be added the holding of each linked enterprise in the same enterprise (Definition, Article 3 paragraph 2 first sub-paragraph).

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Proportional results			

(*) EUR 1 000.

These data should be entered in Box A in Annex A.

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ANNEX B
Linked enterprises

DETERMINE THE CASE APPLICABLE TO THE APPLICANT ENTERPRISE:

☐ **Case 1**: The applicant enterprise draws up consolidated accounts or is included by consolidation in the consolidated accounts of another enterprise. (Box B(1))

☐ **Case 2**: The applicant enterprise or one or more of the linked enterprises do not establish consolidated accounts or are not included in the consolidated accounts. (Box B(2)).

Please note: The data of the enterprises, which are linked to the applicant enterprise, are derived from their accounts and their other data, consolidated if they exist. To them are aggregated proportionally the data of any possible partner enterprise of that linked enterprise, situated immediately upstream or downstream from it, unless it has already been included through consolidation[15].

CALCULATION METHODS FOR EACH CASE:

In case 1: The consolidated accounts serve as the basis for the calculation. Fill in Box B(1) below.

Box B(1)

	Headcount (*)	**Annual turnover (**)**	**Balance sheet total (**)**
Total			

(*) Where in the consolidated accounts no headcount data appears, the calculation of it is done by adding the data from the enterprises to which the enterprise in question is linked.
(**) EUR 1 000.

The data entered in the "Total" row of the above table should be entered in line 1 of the table in the Annex to the declaration.

Identification of the enterprises included through consolidation			
Linked enterprise (name / identification)	**Address (of registered office)**	**Registration / VAT number (*)**	**Names and titles of the principal director(s) (**)**
1.			
2.			
3.			

[15] Definition, Article 6 paragraph 3, second sub-paragraph

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4.			
5.			
6.			
7.			
Total			

(*) To be determined by the Member State according to its needs
(**) Chairman (CEO), Director-General or equivalent.

Important: Partner enterprises of such a linked enterprise, which are not yet included through consolidation, are treated like direct partners of the applicant enterprise. Their data and a 'partnership sheet' should therefore be added in Annex A.
In case 2: For each linked enterprise (including links via other linked enterprises), complete a "linkage sheet" and simply add together the accounts of all the linked enterprises by filling in Box B(2) below.

Box B(2)

Enterprise No.:	**Headcount (AWU)**	**Annual turnover (**)**	**Balance sheet total (**)**
1. (*)			
2. (*)			
3. (*)			
Total			

(*) attach one "linkage sheet" per enterprise
(**) EUR 1 000.

The data entered in the "Total" row of the above table should be entered in line 3 (regarding linked enterprises) of the table in the Annex to the declaration.

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LINKAGE SHEET
(only for linked enterprises not included by consolidation in Box B)

1. Precise identification of the applicant enterprise

Name or Business name.....
Address (of registered office).....
Registration/VAT number[16].....
Names and titles of the principal director(s)[17].....

2. Data on enterprise

Reference period			
	Headcount (AWU)	**Annual turnover (*)**	**Balance sheet total (*)**
Total			
(*) EUR 1 000.			

These data should be entered in Box B(2) in Annex B.

Important: The data of the enterprises, which are linked to the applicant enterprise, are derived from their accounts and their other data, consolidated if they exist. To them are aggregated proportionally the data of any possible partner enterprise of that linked enterprise, situated immediately upstream or downstream from it, unless it has already been included through consolidation[18].

Such partner enterprises are treated like direct partner enterprises of the applicant enterprise. Their data and a 'partnership sheet' have therefore to be added in Annex A.

[16] To be determined by the Member State according to its needs
[17] Chairman (CEO), Director-General or equivalent.
[18] If the data of an enterprise are included in the consolidated accounts to a lesser proportion than the one determined under Article 6 paragraph 2, the percentage rate according to that article should be applied (Definition, Article 6 paragraph 3, second sub-paragraph).

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CORTEX²

ANNEX 5 Sub-grant Agreement Template (*) subject to change

Open Call 2: to be signed ONLY once selected.
Submission deadline: **15 August 2024, 17:00 CEST**

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Contracting parties

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

On the one part,

_____ [Organisation name/ Individual name] established in _____, [Official address], VAT number _____, represented for the purposes of signing the Agreement by _____ [Name of legal representative], _____ [Position in the organisation], acting as Coordinator of the _____ [%PROJECT_NAME%] consortium.

Hereinafter referred to as the "Coordinator",

_____ [Organisation name/ Individual name] established in _____, [Official address], VAT number _____, represented for the purposes of signing the Agreement by _____ [Name of legal representative], _____ [Position in the organisation], acting as Treasurer of the _____ [%PROJECT_NAME%] consortium. [IF RELEVANT]

Hereinafter referred to as the "Treasurer",

And, on the other part,

_____ [Organisation name/ Individual name] established in _____, [Official address], VAT number _____, represented for the purposes of signing the Agreement by _____ [Name of legal representative],

Hereinafter referred to as the "Beneficiary".

Hereinafter, all parties above are collectively referred to as the "Contracting Parties"

The Contracting Parties **HAVE AGREED** to the following terms and conditions including those in the following Annexes, which form an integral part of this Sub-Grant Agreement (hereinafter referred as the "Contract").

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General Provisions

The European Commission (hereinafter referred as the "EC") and the Coordinator, as partner and representative of the [%PROJECT_NAME%] consortium, have signed the Grant Agreement no. XXXXXX for the implementation of the [%PROJECT_NAME%] project – [%PROJECT FULL TITLE%] – within the framework of the European Union's Horizon 2020 research and innovation programme.

The [%PROJECT_NAME%] project is implemented by the Coordinator, as coordinator of the [%PROJECT_NAME%] project, in collaboration with the other [%PROJECT_NAME%] partners. The [%PROJECT_NAME%] consortium partners have among themselves entered into a written agreement detailing their respective rights and obligations towards each other for carrying out the [%PROJECT_NAME%] project and exploiting the results thereof ("the Consortium Agreement" or "CA").

The objective of [%PROJECT_NAME%] is to [provide description of the project] (…).

The Beneficiary has been selected for funding under the [%PROGRAMME_NAME_NUMBER%] based on the positive evaluation of external evaluators.

This Contract aims at defining the framework of rights and obligations of the Contracting Parties with respect to the Beneficiary's participation in the [%PROGRAMME_NAME_NUMBER%].

The funding to be received by the Beneficiary is property of the EC. The Coordinator and Treasurer (IF APPLICABLE) are mere holders and managers of the funds.

Article 1 - Entry into force and termination of the contract

1.1. Entry into force

This Contract will enter into force on the day of its signature by the last Contracting Party. The Coordinator and Treasurer will sign this contract only after all the following documents have been received from the Beneficiary:

- The original signed Declaration(s) of Honour (as provided in Annex X or Annex Y, *depending on type of applicant*).
- SMEs Declaration form (as provided in Annex Z).
- Bank Account Information form (as provided in Annex XX).

All documents, properly signed and stamped (if applicable), shall be sent to the Coordinator and Treasurer, to the following e-mail: XXXX. The Beneficiary is requested to send all requested documents in a single e-mail and with adequate identification (e-mail subject): [%PROGRAMME_NAME_NUMBER%] – [Sub-project Acronym] documentation. All original should be sent to the following address:

[Address]

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After receipt and validation of the documentation, the Beneficiary will receive a sub-grant agreement (contract) for signature. The Beneficiary is solely responsible for the accuracy of all data provided.

The contact details of the Beneficiary for notices and communication under this contract are:

Name of contact person	_____
Address	_____
E-mail	_____
Telephone/ mobile phone	_____

1.2. Contract termination

This Contract will automatically terminate at the end of (...), which will happen when the Beneficiary has fulfilled all obligations in Article 2, except for those obligations that according to their content are intended to remain in effect, which keep their full force and effect (e.g., reporting on exploitation activities).

The Coordinator shall be entitled to terminate this Contract by written notice with immediate effect if the Beneficiary does not fulfil its obligations (see Article 3 - Breach of Contractual obligations).

Irrespective of the automatic termination of this Contract under present Article 1.2 or any early termination under Article 4, all obligations that according to their content are intended to be in effect for longer shall remain in effect.

Article 2 - Obligations and responsibilities of the Beneficiary

The obligations and responsibilities are defined in detail in Annex 1 - Guidelines for Applicants.

Additionally, the Beneficiary shall take every necessary precaution to avoid any risk of conflict of interest relating to economic interests, political or national affinities, personal or any other interests liable to influence the impartial and objective performance of the sub-project. In case the Beneficiary is involved in a conflict of interest or in a risk of conflict of interest, the Beneficiary must formally notify this situation to the Coordinator without delay and immediately take all the necessary steps to rectify this situation.

Furthermore, the Beneficiary shall provide true and accurate documentation and declarations as defined in Article 1.1.

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Article 3 - Breach of contractual obligations

In the event of a breach of the contractual obligation's representations or warranties by the Beneficiary under this Contract, the Coordinator, in coordination with the [%PROJECT_NAME%] Consortium, reserves the right to terminate the Contract by written notice with immediate effect, even if such non-fulfilment is due to Force Majeure.

In the event of the breach of the contractual obligations by the Beneficiary, the Treasurer with the agreement of the Coordinator reserves the right of not fulfilling the respective payment to the Beneficiary.

The Coordinator also reserves the right to claim a refund of any already paid funds, both in case of breach of contract and/or in case the work/costs are not approved by the EC.

The Coordinator will give written notice requiring that such breach to be remedied within 30 days.

In case the Beneficiary has not brought remedies from the notice, the Coordinator may decide to terminate the contract unilaterally.

Article 4 – Financial contribution and financial provisions

4.1 Maximum financial contribution

The maximum financial contribution to be granted to the Beneficiary shall not exceed the amount of **xxxxxxxxxxxx euros (xxx.xxx,00) *EURO***.

4.2 Distribution of the financial contribution

The financial contribution to be granted to the Beneficiary will be calculated and distributed in accordance with the provisions set in Annex 1 - Guidelines for Applicants.

The financial grant to be paid will always be subject to:

- Provision of a report and a favourable review by the [%PROJECT_NAME%] internal evaluation team responsible for assessing the sub-project in each of the stages.
  - Sprint 1 – xxx % of the budget.
  - Sprint 2 – xxx % of the budget.
  - Sprint 3 – xxx % of the budget.

  Note: A non-favourable review of the work carried out at the end of any stage may lead to the early termination of the contract and suspension of payments.
- The prior notice to the Beneficiary of the date and amount to be transferred to its bank account (Annex 8 - Bank account information form), providing the relevant references.
- Payments to the Beneficiary will be made by the Treasurer. In particular:

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- The Treasurer, with the agreement of the Coordinator, reserves the right to withhold the payments in case the Beneficiary does not fulfil its obligations and tasks as per Annex 1 - Guidelines for Applicants.
- Banking and transaction costs related to the handling of any financial resources made available to the Beneficiary will be covered by the Beneficiary.
- Payments will be released no later than thirty (30) calendar days after the notification by the Coordinator to the Beneficiary that the work and deliverable associated to a particular stage has been approved.

The Beneficiary is responsible for complying with any tax and legal obligations that might be attached to this Contract.

4.3 Payments schedule

The payment schedule is directly linked to the relevant stages of the sub-project according to Annex 1 - Guidelines for Applicants. The payment in each stage will be disbursed once all work related to a specific stage has received positive assessment, supported on the report submitted to the [%PROJECT_NAME%] team.

The financial contribution will be made to the Beneficiary by the Treasurer. During the contractual procedure, the Beneficiary will be asked to provide the respective bank account information to which the payments will be made (as provided in Annex X).

The payment schedule (Table X) is linked to the successful completion of specified milestones and KPIs established by the Beneficiary in its project proposal, which will be evaluated through a report (deliverable) submitted to [%PROJECT_NAME%] at the end of each stage as identified in Annex 1 – Guidelines for Applicants.

Checking the consistency between the estimated costs and resources and the expected work of the project will also be included in the evaluation process. If requested, the Beneficiary will have to present any documentation for the costs claimed.

[Table with the payments schedule]

The Beneficiary should submit to [%PROJECT_NAME%] the deliverable corresponding to each stage no later than ten (10) calendar days after the end of the respective stage, providing sufficient time for the [%PROJECT_NAME%] consortium to review it. A review will be held between fifteen (15) to thirty (30) calendar days after the end of the stage so that the Contracting Parties can present their work and provide answers to questions from the [%PROJECT_NAME%] consortium partners.

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The payments will be made to the Beneficiary subject to the receipt of an invoice or a filled out Financial Identification Form (FIF).[1] If the Beneficiary chooses to send an invoice, the invoice must include the following information:

- Project xxx – Grant no. xxx
- [%PROGRAMME_NAME_NUMBER%]
- The Stage to which the payment is associated [*Sprint 1, Sprint 2, Sprint x*]
- Beneficiary information (e.g. sub-project acronym and beneficiary name)

The invoice or the FIF is to be sent to e-mail. Payments will only be initiated once the work has been approved. Payments will be made no later than thirty (30) calendar days after receipt of the invoice or FIF to the bank account of the Beneficiary as provided in Annex 8. All payments will be made in Euros.

NOTE: If at any of the payment stages the [%PROJECT_NAME%] team considers that the quality of work demonstrated and/or reported does not correspond to what has been agreed, the two parties may agree to a resubmission of a deliverable and respective reassessment. If significant improvements are not delivered after the reassessment and the sub-project is therefore considered to be in breach of their contractual obligations, [%PROJECT_NAME%] reserves the right to terminate the contract as outlined in *Article 3 – Breach of contractual obligations*.

Article 5 - Liability

5.1 Liability of the Beneficiary

The Beneficiary shall fully and exclusively bear the risks in connection with the fulfilment of its tasks and obligations under this Contract. Except in case of force majeure (Article 8), the Beneficiary must compensate the Coordinator, the Treasurer and the EC for any damage they sustain because of the implementation of the obligations of the Beneficiary under this Contract or because the tasks and obligations of the Beneficiary were not implemented in full compliance with this Contract.

Accordingly, neither [%PROJECT_NAME%] Consortium nor the EC can be held liable for any damage caused to the Beneficiary or to third parties because of implementing this Contract, including for gross negligence. At the same time, neither [%PROJECT_NAME%] consortium nor the EC can be held liable for any damage caused by the Beneficiary or third parties, because of implementing this Contract.

The Beneficiary shall bear sole responsibility for ensuring that its acts within the framework of this Contract do not infringe third parties' rights. There is no joint liability between the Contracting Parties. For this purpose, the Beneficiary shall indemnify and hold the Coordinator, the Treasurer and the EC harmless from and against all repayments, loss, liability, costs,

[1] https://ec.europa.eu/info/sites/info/files/about_the_european_commission/eu_budget/fich_sign_ba_gb_en_0.pdf

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charges, claims or damages which the Coordinator, the Treasurer or the EC as a result thereof would incur or suffer or must pay to the EC or any third parties. In addition, should the EC have a right of recovery against [%PROJECT_NAME%] consortium regarding any or all the financial support granted under this Contract, the Beneficiary shall repay the sums in question in the terms and on the date specified by the Coordinator.

○ 5.2 Exclusions of liability

To the extent acceptable under applicable law, in no event shall the Coordinator or other [%PROJECT_NAME%] consortium partners be liable to the Beneficiary for loss or damage caused by the Coordinator or the [%PROJECT_NAME%] consortium partners, their employees, agents and subcontractors in connection with this Contract for any of the following, however caused or arising, on any theory of liability, and even if the Coordinator and/or any other [%PROJECT_NAME%] consortium partner were informed or aware of the possibility thereof:

- Loss of profits, revenue, income, interest, savings, shelf-space, production, and business.
- Opportunities; lost contracts, goodwill, and anticipated savings.
- Loss of or damage to reputation or to data.
- Costs of recall of products.
- Any type of indirect, incidental, punitive, special, or consequential loss or damage.

In respect of any information or materials from the [%PROJECT_NAME%] consortium made available to the Beneficiary under this Contract, no warranty or representation of any kind is made, given, or implied as to the sufficiency, error-free performance, or fitness for purpose, nor as to the absence of any infringement of any proprietary rights of third parties. Therefore, in particular, but without limiting the foregoing:

- The Beneficiary shall in all cases be entirely and solely liable for the use to which it puts such information and materials, and the consequences of such use, and
- Neither the Coordinator, the EC nor the other [%PROJECT_NAME%] consortium partners shall be liable vis-à-vis the Beneficiary in case of infringement of proprietary rights of a third party resulting from the Beneficiary's use of the information and material.

The exclusions and limitations stated in this Article and any other clause of this Contract that has as its object or effect the exclusion or limitation of liability, shall not apply in respect of any: fraud; death, injury to natural persons or damage to real or immovable property caused by the negligence or wilful act, wilful misconduct, wilful breach; or otherwise in so far as mandatory applicable law overrides such exclusions and limitations.

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Article 6 - Confidentiality

6.1 Principles

Regarding all information of whatever nature or form as is disclosed between the Contracting Parties in connection with the Sub-project and identified in writing as confidential, the terms of this Article shall apply.

6.2 Obligations

All information, in whatever form or mode of communication, which is disclosed by a Contracting Party (the "Disclosing Party") to the other Contracting Party (the "Recipient") in connection with the implementation of the [%PROGRAMME_NAME_NUMBER%] and which has been explicitly marked as "confidential" at the time of disclosure, or, when disclosed orally, has been identified as confidential at the time of disclosure and has been confirmed and designated in writing within 15 calendar days from oral disclosure (at the latest) as confidential information by the Disclosing Party, is "Confidential Information".

The Recipient hereby accepts, in addition and without prejudice to any commitment on nondisclosure towards the EC, for a period of 5 (five) years after the end of the Contract:

- Not to use Confidential Information other than for the purpose for which it was disclosed.
- Not to disclose Confidential Information without the prior written consent by the Disclosing Party.
- To ensure that internal distribution of Confidential Information by a Recipient shall take place on a strict need-to-know basis.
- To return to the Disclosing Party, or destroy, on demand, all Confidential Information that has been disclosed to the Recipient, including all copies and to delete all information stored in a machine-readable form to the extent practically possible. The Recipient may keep a copy to the extent it is required to keep, archive, or store such Confidential Information because of compliance with applicable laws and regulations or for the proof of on-going obligations provided that the Recipient complies with the confidentiality obligations herein contained with respect to such copy for as long as the copy is retained.

The Recipient shall be responsible for the fulfilment of the above obligations on the part of their employees or third parties involved in the implementation of [%PROGRAMME_NAME_NUMBER%] and shall ensure that they remain so obliged, as far as legally possible, during and after the end hereof and/or after the termination of the contractual relationship with the employee or third party. The Recipient shall apply the same degree of care regarding the Confidential Information disclosed within the scope of the project as with its own confidential and/or proprietary information, but in no case less than reasonable care. Each Contracting Party shall promptly advise the other Contracting Party in writing of any unauthorized disclosure, misappropriation, or misuse of Confidential Information after it becomes aware of such unauthorized disclosure, misappropriation, or misuse.

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6.3 Exceptions to the obligation of confidentiality

The information above (Article 6.2) shall not apply for disclosure or use of Confidential Information, if and in so far as the Recipient can show that:

- The Confidential Information has become or becomes publicly available by means other than a breach of the Recipient's confidentiality obligations.
- The Disclosing Party subsequently informs the Recipient that the Confidential Information is no longer confidential.
- The Confidential Information is communicated to the Recipient without any obligation of confidentiality by a third party who is to the best knowledge of the Recipient in lawful possession thereof and under no obligation of confidentiality to the Disclosing Party.
- The disclosure or communication of the Confidential Information is foreseen by provisions of the Grant Agreement.
- The Confidential Information, at any time, was developed by the Recipient completely independently of any such disclosure by the Disclosing Party.
- The Confidential Information was already known to the Recipient prior to disclosure.
- Disclosure of the Confidential Information follows mandatory applicable laws or regulations or with a court or administrative order.

6.4 Authorised disclosure(s)

If any Party becomes aware that it will be required, or is likely to be required, to disclose Confidential Information to comply with applicable laws or regulations or with a court or administrative order, it will, to the extent it is lawfully able to do so under the laws and legislation applicable to said Party, prior to any such disclosure:

- Notify the Disclosing Party, and
- Comply with the Disclosing Party's reasonable instructions to protect the confidentiality of the information.

The [%PROJECT_NAME%] Coordinator's disclosure of Confidential Information to the EC and/or the other [%PROJECT_NAME%] consortium partners shall be governed exclusively by the terms of the Grant Agreement and/or the Consortium Agreement.

Accordingly, nothing in this Contract shall prevent the [%PROJECT_NAME%] Coordinator from complying with its obligations, including its reporting obligations, towards the EC and the other [%PROJECT_NAME%] consortium partners, and any such disclosures shall be subject to the terms of the Grant Agreement or Consortium Agreement.

Likewise, the Beneficiary agrees and acknowledges that the EC shall be entitled to disclose Confidential Information to its staff, other EU institutions and bodies or third parties, if:

- This is necessary to implement the Grant Agreement or safeguard the EU's financial interests.
- The recipients of the information are bound by an obligation of confidentiality.

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Article 7 - Intellectual property rights

The Beneficiary acknowledges that all tools, modules and similar of the [%PROJECT_NAME%] partners are proprietary and owned by the respective [%PROJECT_NAME%] partner or applicable third party.

Nothing in this Contract shall transfer to the Beneficiary or other partners it represents any license or other rights for the use of the tools, modules and similar that are property of an [%PROJECT_NAME%] partner, unless a specific agreement is established.

The results developed during the sub-project shall be exclusively the property of the Beneficiary. This does not exclude the possibility for specific agreements to be made between the Beneficiary and one or more of the partners of [%PROJECT_NAME%].

Article 8 - Force Majeure

"Force Majeure" means any unforeseeable exceptional situation or event beyond the Contracting Parties control, which prevents either of them from fulfilling any of their obligations under the Agreement, which was not attributable to error or negligence on their part and which proves to be inevitable despite the exercising of all due diligence.

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, as well as labour disputes, strikes or financial difficulties cannot be invoked as Force Majeure.

The Contracting Parties shall take the necessary measures to limit any damage due to Force Majeure. They shall do their best to resume the implementation of the action as soon as possible.

No Contracting Party shall be in breach of its obligations and tasks if such a breach is caused by Force Majeure. A Contracting Party will notify the other Contracting Party of any Force Majeure as soon as possible. In case the Beneficiary is not able to overcome the consequences of Force Majeure within thirty calendar (30) days after such notification, the [%PROJECT_NAME%] Coordinator will decide accordingly, including the termination of the Contract.

Included background: Background is defined as "data, know-how or information that is needed to implement the Action or exploit the results". Because of this need, Access Rights have to be granted in principle, but Parties must identify and agree amongst them on the Background for the Project. The Beneficiary has identified and agreed on the Background for the Project and has also, where relevant, informed the consortium that Access to specific Background is subject to legal restrictions or limits.

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Anything not identified in the following table shall not be the object of Access Right obligations regarding Background.

Describe Background	Specific restrictions and/or conditions for **implementation**	Specific restrictions and/or conditions for **Exploitation**

Article 9 - Information and communication

○ 9.1 Information and communication towards the EC

The Beneficiary shall, throughout the duration of the sub-project, take appropriate measures to engage with the public and the media about the sub-project and **to highlight the financial support of the EC and the** [%PROJECT_NAME%] **project**.

Unless the EC requests otherwise, any publicity, including at a conference or seminar or any type of information or promotional material (brochure, leaflet, poster, presentation etc.), and any infrastructure, equipment, and major results must:

- Specify that the sub-project has received research funding from the EC through the [%PROJECT_NAME%] project.
- Display the European emblem along with the [%PROJECT_NAME%] logo. When displayed in association with a logo, the European emblem should be given appropriate prominence. This obligation to use the European emblem in respect of projects to which the EC contributes implies no right of exclusive use. It is subject to general third-party use restrictions which do not permit the appropriation of the emblem, or of any similar trademark or logo, whether by registration or by any other means. Under these conditions, the Beneficiary is exempt from the obligation to obtain prior permission from the EC to use the emblem.
- Specify that it reflects only the author's views and that the EC and the [%PROJECT_NAME%] Consortium is not liable for any use that may be made of the information contained therein. The following text should be used:

  "*The [sub-project acronym] has indirectly received funding from the European Union's Horizon Europe programme, via the* [%PROGRAMME_NAME_NUMBER%] *issued and executed under the* [%PROJECT_NAME%] *project (Grant Agreement no. XXXXXX).*"

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The Coordinator, the [%PROJECT_NAME%] consortium, and/or the EC shall be authorised to publish, in whatever form and on or by whatever medium, the following information:

- The name of the Beneficiary.
- Contact address of the Beneficiary.
- The general purpose of the sub-project (publishable summary, etc.)
- The amount of the financial contribution of the EC foreseen for the sub-project. after the final payment, the amount and rate of the financial contribution of the EC accepted by the EC.
- The estimated amount and rate of the financial contribution of the EC foreseen for the Beneficiary in the table of the estimated breakdown of budget.
- The geographic location of the activities carried out.
- The list of dissemination activities and/or of patent (applications) relating to foreground.
- The publishable reports submitted (technical reports are excluded, since they are confidential).
- Any picture or any audio-visual or web material provided to the EC in the framework of the Sub-project.

The Beneficiary shall ensure that all necessary authorisations for such publication have been obtained and that the publication of the information by the [%PROJECT_NAME%] Coordinator, the [%PROJECT_NAME%] consortium partners, or EC does not infringe any rights of third parties.

Upon a duly supported request by the Coordinator on behalf of the Beneficiary, the EC may agree to forego such publicity if disclosure of the information indicated above would risk compromising the beneficiary's security, academic or commercial interests.

9.2 Information and communication among the Contracting Parties

Any notice to be given under this Contract shall be in writing to the addresses and recipients listed above. Any change of persons or contact details shall be notified immediately to the [%PROJECT_NAME%] Coordinator. The address list shall be made accessible to all parties concerned.

Article 10 - Checks and reviews

The EC may, at any time during the implementation of the sub-project and up to five years after the end of the sub-project, arrange for a check and review to be carried out, by external auditors, or by the EC services themselves, including the European Anti-Fraud office (OLAF). The procedure shall be deemed to be initiated on the date of receipt of the relevant letter sent by the EC.

There will be no financial checks, reviews, or audits to check costs, since beneficiaries have no obligation to document the costs incurred for the action. Checks, reviews, and audits will focus on the technical implementation of the action.

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The Beneficiary shall make available directly to the EC all information and data that may be requested by the EC or any representative authorised by it, in view of verifying that the Grant Agreement is properly managed and performed in accordance with its provisions.

The Beneficiary shall keep the originals or, in exceptional cases, duly authenticated copies (including electronic copies) of all documents related to the Grant Agreement for up to five years from the end of the sub-project. These shall be made available to the EC when requested during any check under the Grant Agreement.

To carry out these checks, the Beneficiary shall ensure that the EC´s services and any external body(ies) authorised by it have on-the-spot access at all reasonable times, notably to the Beneficiary's offices, to its computer data, and to all the information needed to carry out those checks. They shall ensure that the information is readily available on the spot during an audit and, if so requested, that data be handed over in an appropriate form.

Based on the findings made during the check, a provisional report shall be drawn up. It shall be sent by the EC or its authorised representative to the Beneficiary concerned, which may make observations thereon within one month of receiving it. The EC may decide not to take into account observations conveyed or documents sent after that deadline. The final report shall be sent to the Beneficiary concerned within two months of expiry of the aforesaid deadline.

Based on the conclusions of the check, the EC shall take all appropriate measures which it considers necessary, including the issuing of recovery orders regarding all or part of the payments made by it and the application of any applicable sanction.

The European Court of Auditors shall have the same rights as the EC, notably right of access, for the purpose of checks and audits, without prejudice to its own rules.

In addition, the EC may carry out on-the-spot checks and inspections in accordance with Council Regulation (Euratom, EC) No 2185/96 of 11 November 1996 concerning on-the-spot checks and inspections carried out by the EC to protect the European Communities' financial interests against fraud and other irregularities.

Article 11 – Data protection

The Contracting Parties have the obligation to abide by the Regulation (EU) 2016/679 (General Data Protection Regulation – GDPR) of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons regarding the processing of personal data and on the free movement of such data.

Each Contracting Party shall each be considered a separate and independent data controller, as defined in the GDPR, to every other Contracting Party. The processing of personal data shall be carried out lawfully, fairly and in a transparent manner, collected for specific purposes and adequate, relevant, and limited to what is necessary in relation to the purposes for which it is

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processed. Where it might be designated by a relevant Supervisory Authority or through agreement between Contracting Parties that the [%PROJECT_NAME%] Coordinator and any other [%PROJECT_NAME%] consortium partners are appointed as data processors, parties shall enter into appropriate data processing agreements as required by the GDPR.

The Beneficiary acknowledges that the [%PROJECT_NAME%] Coordinator and any other [%PROJECT_NAME%] consortium partners, if appointed as data processors, are not responsible for the Beneficiary's compliance with any data protection or privacy law applicable to the Beneficiary. Each of the Contracting Parties, in their respective roles as data controllers, will be responsible for their own compliance with any data protection or privacy law applicable to them as data controller.

Article 12 - Obligations imposed by the Grant Agreement to the Beneficiary

The Beneficiary receives funding from the European Commission for carrying out the sub-project _____ [sub-project acronym]. Under the Grant Agreement or the Consortium Agreement, some of the obligations must be imposed on the Beneficiary. Those obligations are reflected in this Agreement. The specific obligations that the Beneficiary must ensure are described in the Multi-Beneficiary General Model Grant Agreement[2] (HE General MGA – Multi). The relevant articles are included in this Contract and are fully applicable to the Beneficiary.

The Beneficiary acknowledges and agrees that these obligations comprised in this Agreement and the above-mentioned obligations of the Multi-Beneficiary General Model are fully applicable to it.

Article 13 - Miscellaneous

Should any provision of this Contract be or become invalid, illegal, or unenforceable, it shall not affect the validity of the remaining provisions of this Contract. In such a case, the Contracting Parties shall be entitled to request that a valid, legal, enforceable, and practicable replacement provision be negotiated which fulfils the purpose of the original provision.

The Beneficiary shall not be entitled to act or to make legally binding declarations on behalf of the Coordinator or any other [%PROJECT_NAME%] consortium partner, and nothing in this Contract shall be deemed to constitute a joint venture, agency, partnership, interest grouping or any other kind of formal business grouping or entity between the Contracting Parties or between the Beneficiary and any [%PROJECT_NAME%] consortium partner.

[2] https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/agr-contr/general-mga_horizon-euratom_en.pdf

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No rights or obligations of the Beneficiary arising from this Contract may be assigned or transferred, in whole or in part, and no obligations of the Beneficiary may be sub-contracted, without the Coordinator's prior formal written approval; and such approval shall not exempt the Beneficiary from any of its obligations hereunder.

Although (with exception to the Coordinator and the Treasurer) the [%PROJECT_NAME%] consortium partners and their affiliated entities are not Contracting Parties to this Contract, they are intended by the Contracting Parties to be third party beneficiaries under this Contract and accordingly shall be entitled to enforce the terms of this Contract against the Beneficiary and (without limitation) shall be entitled to the benefit of, and to enforce any exclusion of limitation of liability of the [%PROJECT_NAME%] consortium partners contained in this Contract and any indemnity in favour of the [%PROJECT_NAME%] consortium partners contained in this Contract.

Amendments and modifications to the text of this Agreement require a separate written agreement to be signed between all Parties. Although this Contract refers to the provisions of the CA and GA, the Beneficiary is not a party to the CA or GA but only bound towards the Coordinator by the CA and GA provisions as referred or reproduced in this Contract.

This Contract is drawn up in English language which shall govern all documents, notices, meetings, and processes relative thereto.

Article 14 - Applicable Law

This Contract shall be construed in accordance with and governed by the laws of Ireland.

Article 15 - Settlement of disputes

If the Contracting Parties are unable to resolve a dispute amicably, such dispute will be finally settled under the Rules of Arbitration of the International Chamber of Commerce by three (3) arbitrators in Dublin.

Each of the Contracting Parties to the dispute shall appoint one (1) arbitrator and the two (2) arbitrators so appointed shall elect the presiding arbitrator. Should a Party to the dispute which should appoint an arbitrator fails to do so within fourteen (14) days of the delivery of the written notice to do so from the other Party to the dispute or should the appointed arbitrators fail to reach agreement on the presiding arbitrator within fourteen (14) days after their appointment, such arbitrator shall be appointed in accordance with the Rules upon request of any of the Parties to the dispute.

The seat of arbitration shall be Dublin.

The Contracting Parties agree that the language of the arbitration, including oral hearings, written evidence, and correspondence shall be English.

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A duly rendered arbitration award shall be final and binding on the Contracting Parties to the dispute. Each Contracting Party to the arbitration conducted in accordance with this section hereof shall bear its own expenses incurred in connection with such arbitration, including fees of its legal counsels. All other costs and expenses shall be apportioned between the Contracting Parties to the arbitration in accordance with the decision of the arbitrators.

Nothing in this Contract shall limit the Contracting Parties right to seek injunctive relief or to enforce an arbitration award in any applicable competent court of law.

Article 16 – No double funding

By signing this Agreement, the Beneficiary declares to be aware of the fundamental principle underpinning the rules for public expenditure in the EU that no costs for the same activity be funded twice from the EU budget, as defined in the Article 111 of Council Regulation (EC, Euratom) No. 1605/2002 of 25 June 2002 on the Financial Regulation, and confirms that all the work performed under [%PROJECT_NAME%] (Grant Agreement no. XXXXXX) will be done exclusively in the scope of this programme, not being supported or funded by any other European Commission programme.

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AS WITNESS:

The Contracting Parties have caused this Contract to be duly signed by the undersigned authorized representatives **in three (3) copies** the day and year first above written:

For XXX ([%PROJECT_NAME%] Coordinator) Mr/Ms [NAME SURNAME] [POSITION_IN_ORGANISATION] Signature Done at _____ on DD/MM/202Y	For XXXX (Treasurer) Mr/Ms _____ [NAME SURNAME] _____ [POSITION_IN_COMPANY] Signature Done at _____ on DD/MM/202Y
For _____ [organization/ individual name] (the Beneficiary) Mr/Ms _____ [NAME SURNAME] _____ [POSITION_IN_ORGANISATION] Signature Done at _____ on DD/MM/202Y	

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ANNEXES

- **Annex XXX: Technical Proposal**
- **Annex XXX: Declaration of Honour**
- **Annex XXX: SME Declaration (if applicable)**
- **Annex XXX: Bank account**

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CORTEX²

ANNEX 6
Bank Account Information

Open Call 2: To submit ONLY once selected
Submission deadline: **15 AUG 2024, 17:00 CEST**

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ACCOUNT HOLDER INFORMATION

Account Name Holder *The name or title under which the account has been opened and NOT the name of the authorized agent.*	
Holder's Address	
Postcode	
Town/City	
Country	

Contact Person *Does not need to be an authorised agent.*	
Telephone	
Mobile phone	

BANK ACCOUNT INFORMATION

Bank Name	
Branch Address	
Postcode	
Town/City	
Country	
IBAN number / Account number *Format example: ES76 2077 0024 0031 0257 5766*	
SWIFT code *8 to 11 characters*	

BANK STAMP + SIGNATURE OF BANK REPRESENTATIVE	DATE + SIGNATURE OF ACCOUNT HOLDER (**MANDATORY**)
The bank stamp + signature of the bank representative can be replaced with the attachment of a recent bank statement (less than 2 months).	

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