

Project deliverable D5.1

Open Calls Documentation Package

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List of contributors

Name	Organisation
Apostolis Salkintzis	LNVO
Ramon de Souza Schwartz	TNO
Daniele Brevi	LINKS
Edoardo Bonetto	LINKS
Harilaos Koumaras	NCSR
Konstantinos Katsaros	ICCS
Pavlos Basaras	ICCS
Marco Bazzani	TEO
Zouzias Dimitris	eBOS
George Christou	ERT
Ioannis Neokosmidis	INC
Eleonora Fiori	COTO

Quality control

	Name	Organisation	Date
Peer review 1	Konstantinos Katsaros, Anargyros Roumeliotis	ICCS	2/6/2025
Peer review 2	Marco Bazzani	TEO	2/6/2025

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LIST OF ABBREVIATIONS

Acronym	Meaning
5G	5th generation mobile communications network.
5GS	5G System
B5G	Beyond 5G
B5GS	Beyond 5G System
CA	Consortium Agreement
CAM	Connected Automated Mobility
CCAM	Connected, Cooperative and Automated Mobility
CM	Communication Manager
DL	Deliverable Leaders
EC	European Commission
EAB	External Advisory Board
FSTP	Financial Support to Third Parties
HoA	Handbook of Applicants
HPLMN	Home Public Land Mobile Network
IA	Innovation Action
JU	Joint Undertaking
IMP	Individual Mentoring Plan
KPI	Key Performance Indicator
KVI	Key Value Indicator
OC	Open Call
OCM	Open Calls Manager
OCT	Overseas Countries and Territories
PU	Public
PC	Project Coordinator

pQoS	Predictive Quality of Service
SGA	Sub-Grant Agreement
SEE	SouthEast Europe
SME	Small and Medium-sized Enterprise
UC	Use Case

PROJECT EXECUTIVE SUMMARY

ENVELOPE aims to advance and open up the reference 5G advanced architecture and transform it into a vertical-oriented one. It proposes a novel open and easy-to-use 5G-advanced architecture to enable a tighter integration of the network and the service information domains by

- exposing network capabilities to verticals,
- providing vertical information to the network; and
- enabling verticals to dynamically request and modify key network aspects,

all performed in an open, transparent and easy-to-use, semi-automated way.

ENVELOPE creates APIs that act as an intermediate abstraction layer which translate the complicated 5G System (5GS) interfaces and services into easy-to-use services commonly accessible by network verticals. Aside from the creation of an experimentation framework, the main innovations developed by the project are the following:

- MEC with service continuity support,
- zero-touch management,
- multi-connectivity and
- predictive QoS.

ENVELOPE will deliver three large-scale Beyond 5G (B5G) trial sites in Italy, Netherlands and Greece, adding and supporting novel vertical services with advanced exposure capabilities, moreover, new functionalities tailored to the services' needs. Although focused on the Connected and Automation Mobility (CAM) vertical, the developments resulting from the Use Cases (UCs) will be reusable by any vertical.

The ENVELOPE architecture will serve as an envelope that can cover, accommodate and support any type of vertical services. The applicability of ENVELOPE will be demonstrated and validated by the CAM UCs and the experimentations performed by 3rd parties that will have the opportunity to conduct funded research and test their innovative solutions over ENVELOPE.

1. Deliverable Executive summary

This deliverable presents the documentation package of the first Open Call (OC) conducted under Task 5.1 of the ENVELOPE project. Task 5.1 was responsible for creating the documentation package needed for managing and implementing the open calls to foster innovation and attract external collaborations aligned with the project's goals. The documentation package and the Redress Processes developed for this call have taken into consideration the proceedings and templates proposed during the proceedings of the cross-project Open Call Task Force for the SNS JU projects created to coordinate OC actions and assist SNS JU to improve OC processes.

The first Open Call was launched on June 1, 2025, initiating a comprehensive submission and evaluation process. The feasibility check phase, conducted by internal technical partners, allowed interested applicants to submit their concepts for preliminary assessment during the dissemination period of the OC from May 1st until June 15, 2025. Applicants who passed this phase were invited to submit full proposals by July 30, 2025.

The call welcomed proposals from consortia of a maximum of five organisations, including Small and Medium-sized Enterprises (SMEs), Research and Technology Organisations (RTOs), or Universities from EU Member States or Horizon Europe-associated countries. Each submission will undergo rigorous admissibility and eligibility checks, including verification of Participant Identification Codes (PIC) and financial viability assessments of all organisations involved.

External experts, selected based on their expertise, will evaluate these proposals according to criteria such as excellence, impact, and implementation, following a framework aligned with Horizon Europe standards. To ensure transparency and objectivity, each proposal was reviewed by two experts.

Applicants are to be informed of the evaluation results in October 2025, and those who successfully passed the process will be invited to sign the Sub-grant agreements (SGAs). This deliverable describes the entire Financial Support to Third

Parties (FSTP) management process and the documentation package that accompanies it, from the launch of the Open Call to the contracting phase.

INTENDED AUDIENCE

The dissemination level of document D1.3 is 'public' (PU), thus the deliverable is available for all members of the consortium, the European Commission (EC) Services and those external to the project. This document is primarily intended to serve as an internal guideline and reference for all ENVELOPE beneficiaries, especially the governance bodies such as the General Assembly, the Technical Management Team, and the External Advisory Board. The main goal is for all beneficiaries to understand the procedures dealing with innovation management processes applied to the project.

2. Introduction

2.1. Mapping ENVELOPE Outputs

The purpose of this section is to map ENVELOPE Grant Agreement commitments, both within the formal Deliverable and Task description, against the project's respective outputs and work performed.

Table 1: Adherence to ENVELOPE GA Deliverable & Tasks Descriptions

Deliverable D5.1 – Open Calls Documentation Package			
ENVELOPE GA Component Title	ENVELOPE GA Component Outline	Respective Document Chapter(s)	Justification
Task T5.1 – Open calls documentation and evaluation process [M7-M18] – Leader: EBOS	<p>This task will prepare the needed open call package of documents and the communication toolkit, i.e., Call text, Handbook of applicants including legal details, NDA template and all requested administrative information. Main activities:</p> <ul style="list-style-type: none"> • Prepare an open call package of documents and the Communication Toolkit. • Define open call proposals evaluation methodology, selection criteria and KPIs, openness and transparency conditions, eligibility and exclusion criteria. • Dissemination of the open call through various communication channels, i.e., workshops, newsletters, social media announcements, Infodays, the SNS Joint Undertaking WGs, the EC portal, the international platform for Public Tenders, and the project website. 	Chapters 3-4 and ANNEXES	<p>Chapter 3 offers general information and descriptions about Open Call 1.</p> <p>Chapter 4 details the criteria and processes for submission and evaluation.</p> <p>ANNEXES Section presents in detail each of the documents that comprise the documentation package.</p>

2.2. Deliverable Overview and Report Structure

This deliverable is structured to provide a comprehensive overview of the ENVELOPE Open Call 1, covering all key phases from its announcement to project contracting.

- The Executive Summary offers a high-level overview of the Open Call's objectives, process, and key outcomes.
- Chapter 2 (Introduction) presents the structure of the deliverable and introduces its purpose.
- Chapter 3 provides an overview of Open Call 1, including its motivation, objectives, topics, eligibility criteria, and funding scheme.
- Chapter 4 details the FSTP procedure, describing, among else, submission and evaluation criteria, explaining the admissibility, eligibility checks, and external evaluation process followed, and finally the contracting and payment phases covering the preparation and signing of SGAs, as well as the milestone review process.
- Chapter 5 summarises all work done for this call.
- Finally, the ANNEXES Section present all the documents that were produced as part of the documentation package of the OC, such as the Guide for Applicants, Application and Feasibility Check forms, Evaluation Guide, Sub-Grant Agreement template, and other key reference materials.

3. ENVELOPE OPEN CALL 1 DESCRIPTION

This chapter provides an overview of the ENVELOPE project's First Open Call, outlining its Motivation and Goals, Topics, Timeline, and Grant distribution.

3.1. Motivation and Goals

The First Open Call of the ENVELOPE project was launched to validate the capabilities, functionality, and performance of the ENVELOPE Experimental Facility in domains that complement the domains of the internal Use Cases in order to assure its broad suitability and viability. With a total budget for Open Calls set at €2,700,000, 50% (€1,350,000) was allocated for the First Open Call to fund up to 5 sub-projects, each receiving a lump-sum funding of up to €300,000, with a maximum of €60,000 per beneficiary.

The goals of the First Open Call included:

- Validating the infrastructure through experiments aligned with the project's objectives.
- Attracting external collaborators to enhance the technological scope of ENVELOPE.
- Encouraging innovation in advanced 6G domains, complementing the project's internal use cases.

The activities that qualify for FSTP are intended to highlight the advanced and creative capabilities of the ENVELOPE platform and enhance the platform's influence in domains and use cases beyond those already covered by the internal use cases. The objective is to maximise the applicability and use of the ENVELOPE experimental facility for CAM vertical applications.

3.2. Beneficiaries

The First Open Call was open to consortia composed of up to 5 legal entities, including:

- SMEs
- Research and Technology Institutes
- Universities and RTOs

At least 50% of the participants per consortium must be SMEs. To ensure fairness, ENVELOPE partners, their affiliates, employees, and board members were strictly prohibited from participating in sub-projects.

For detailed eligibility requirements, refer to **Submission and Evaluation Criteria** in Chapter 4.

3.3. Timeline

The First Open Call followed a structured timeline to ensure transparency and proper management:

- **Launch of Dissemination Period:** May 19, 2025 (17:00 CET).
- **Launch of the Open Call:** June 1, 2025 (17:00 CET).
- **Feasibility Check Submission Deadline:** June 27, 2025 (17:00 CET).
- **Full Proposal Submission Deadline:** July 31, 2025 (17:00 CET).
- **Evaluation Results Notification:** November 7, 2025 (17:00 CET).
- **Sub-grant Agreements Signed:** November 30, 2025 (17:00 CET).
- **Start of Sub-projects:** December 1, 2025 (17:00 CET).

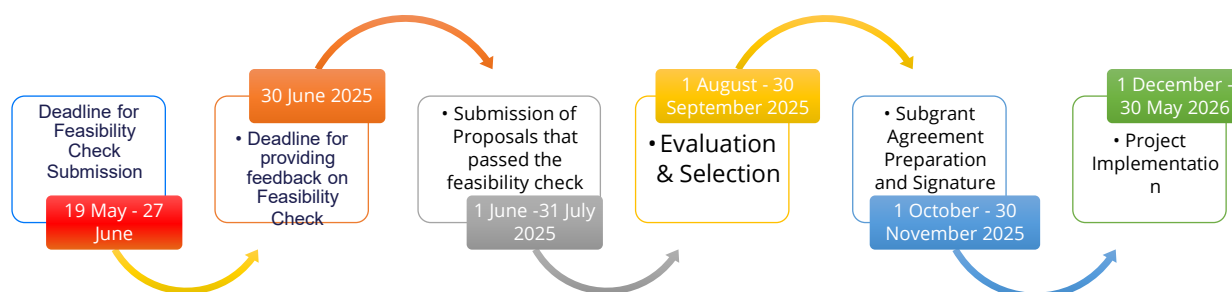


Figure 1: ENVELOPE Open Call Timeline

3.4. Grants and Funding Distribution

The FSTP is distributed based on the completion of specific **deliverables and milestones**. These milestones are tied to the sub-projects' progress and are detailed in the **Individual Mentoring Plan (IMP)**, which is Annexed to the SGA and also described in further detail in the sub-projects' first deliverables (IMP and definition of work - M1). Payments are made upon achievement of the **milestones or Key Performance Indicators (KPIs)**, verified during milestone reviews. More details about the contracts and funding distribution are available in Chapter 0.

4. FSTP PROCEDURE

4.1. Roles and Responsibilities

The evaluation and selection process for Open Call 1 involved two key groups with distinct roles and responsibilities: the **External Experts/Evaluators** and the **Internal Open Call Selection Committee**. These groups will work collaboratively throughout the process described in the following sections to ensure a transparent, fair, and objective process. FSTP Management Process is designed aiming to assist, facilitate, and manage the whole procedure of FSTP grantees, from applicant to pre-selected finalist to grantee (also called beneficiary or third-party project).

4.1.1. ENVELOPE Open Calls Selection Committee

To effectively manage the Financial Support to Third Parties, a "Selection Committee" was established along with an exhaustive procedure for selecting third-party projects, all within a strict timeframe to ensure an adjusted "time to grant" for applicants. The Selection Committee is the project's decision-making body on all critical topics concerning FSTP management.

The committee was composed of:

- Project Coordinator (ICCS)
- Independent Expert (appointed by ICCS)
- Technical Manager (CMS)
- Open Calls Manager (EBOS)
- Innovation Manager (CMS)

The composition of the committee can be extended in the following cases:

- **Consensus meeting:** by bringing two (2) independent External Experts who took part in the Independent Evaluation, as well as the internal Ethics Manager and an Expert. The experts serve in a consultative capacity (i.e., with voice but without vote).
- **Review Milestones:** by involving the Technical Mentors and the internal Ethics Manager – who engage in the evaluation of the deliverables by delivering a report or assessment– if necessary for the validation of deliverables in some key circumstances. The Mentors/Experts participate in the meetings as advisors (i.e., with voice but without vote).

Decisions taken: All decisions are taken by consensus or a minimum of 2/3 majority votes.

The responsibilities of the Selection Committee include:

- Approval of the Open Call Documentation Package
- Validation of all decisions made throughout the Selection Process
- Selection of the outstanding proposals during the Consensus Meeting
- Validation of the grantees' performance and review of Milestones reached
- Approve all FSTP payments made to beneficiaries by the partner responsible for FSTP management

4.1.2. External Experts/Evaluators

External Experts, selected for their relevant expertise, played a critical role in the proposal evaluation phase.

Their responsibilities included:

- **Scoring Proposals:** Each proposal was assessed based on the established evaluation criteria of **Excellence**, **Impact**, and **Implementation**.
- **Participation in Consensus Meetings:** After individual evaluations, the experts join consensus meetings to agree on a final ranking list for the proposals, if necessary.
- **Ensuring Integrity and Fairness:** Evaluators were required to maintain objectivity and fairness

throughout the evaluation process and declare the absence of any conflicts of interest.

4.1.3. Applicants

The applicants must be a CONSORTIUM of no more than five entities from EU member states or countries engaged with Horizon Europe. Entities from third countries that are not affiliated with Horizon Europe are ineligible for funding. The expected consortium composition must be composed of SMEs (at least 50% of the consortium's members), Research Institutes or Universities. Entities must be located in one of the EU Member States, their Overseas Countries and Territories (OCT), or a Horizon Europe Associated Country. Consortia having at least one member from one of the South-East Europe (SEE) nations will be favoured, as one of the purposes of the ENVELOPE Project is to support European countries under-represented in European funding programmes. ENVELOPE partners CANNOT be involved in the grantees' initiatives, nor can their affiliates or employees - including those working under an employment contract, contract, or contract identical to an employment contract - or board members.

4.2. Funding Stages and Milestones

In the management of FSTP, the ENVELOPE Project will use an FSTP process (as illustrated in Figure 2) that ensures compliance with EC requirements and adheres to Horizon Europe standards in terms of transparency, equal treatment, conflict of interest, and confidentiality, based on the indications established in the Horizon Europe - Work Programme 2023 -2024 General Annexes, Section B69. To choose beneficiaries, the ENVELOPE Project will use a funnel method (i.e., a phased selection process).

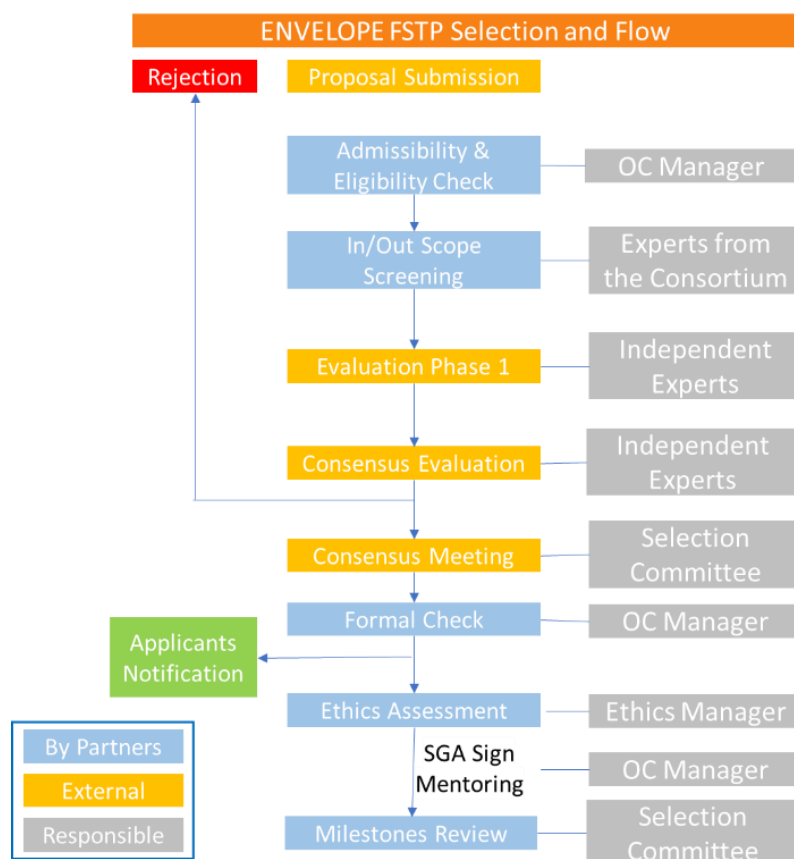


Figure 2: ENVELOPE Selection Process

The FSTP process -from the preparatory tasks starts till the SGAs being signed- will last around 9 months, as presented in Figure 3.

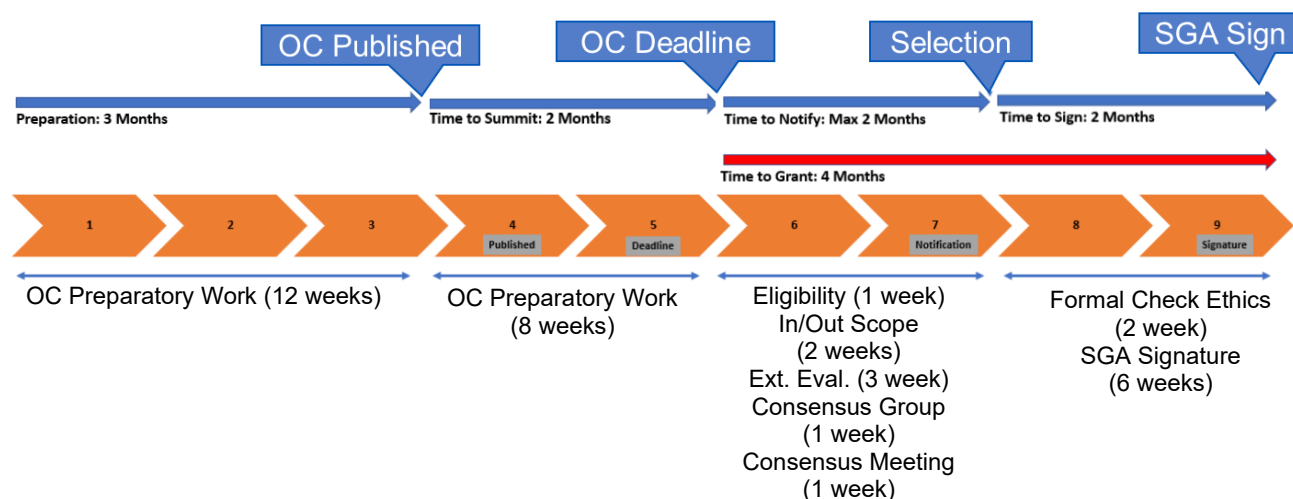


Figure 3: ENVELOPE Open Call timeline

A Feasibility Check process was placed as the first step in the ENVELOPE Open Call 1 procedure. Before submitting their full proposals, applicants were required to complete and submit a Feasibility Check (**ANNEX 5: Feasibility Check Template**), which included a project summary and details about the requested ENVELOPE resources.

Experts appointed by the partners will review these submissions to assess the feasibility of the proposed projects. This step will ensure that all proposed projects are aligned with the goals and available resources of the ENVELOPE infrastructure. Those finally accepted will be reviewed by the ENVELOPE Selection Committee. Proposals that will successfully pass the Feasibility Check will be formally invited to proceed with the submission of a full proposal.

Applicants submitted the Feasibility Check Form to helpdesk@lists.envelope-project.eu using the official template provided on the ENVELOPE website.

The FSTP management will cover the time till the grantees execute their projects and payments are done after Milestones Reviews. The funding distribution for each sub-project is structured into three stages, as detailed below:

Table 2: Stages of funding distribution based on the completion of specific milestones and deliverables.

Stage	Payment Month	Milestone	Payment Amount	% Of Lump Sum
Stage 1: Definition	End of Month 1	IMP and definition of work	Up to €45,000	15%
Stage 2: Implementation	End of Month 5	Report on sub-project implementation	Up to €210,000	70%
Stage 3: Evaluation and feedback	End of Month 6	Project implementation report and feedback on findings	Up to €45,000	15%

The total lump sum per sub-project is up to €300,000, with a maximum of €60,000 allocated per beneficiary.

4.3. Criteria for financial support

4.3.1. Evaluation Criteria for Feasibility Check

The Feasibility Check for Open Call 1 evaluated proposals based on the following criteria:

1. **Compatibility with ENVELOPE Infrastructure:** The proposed projects were assessed for compatibility with the available resources within the ENVELOPE infrastructure and alignment with the specified scope of the open call.
2. **Completion of Feasibility Check Document:** The Selection Committee verified that the Feasibility Check Form included all required information.
3. **Functionality Validation:** Initial proposals were evaluated for logical coherence and alignment with the ENVELOPE facility's expectations.
4. **Alignment with ENVELOPE Technical Objectives:** The proposals were assessed for alignment with the technical objectives outlined by ENVELOPE.
5. **Budget Estimation and Justification:** The Selection Committee evaluated the accuracy and justification of the budget estimates provided in the proposals.
6. **Risk Assessment:** The feasibility of mitigating identified risks associated with the proposed projects was reviewed.
7. **Innovation and Impact:** The level of innovation presented in the proposals and their potential impact were key factors in the assessment.
8. **Project Timeline:** The proposed timelines were reviewed to ensure feasibility and alignment with the open call schedule.

Through this process, the **Feasibility Check** enabled the Selection Committee to identify the most promising projects while ensuring alignment with the project's objectives and resources.

4.3.2. Admissibility and Eligibility Check Criteria

The Admissibility and Eligibility check will be done by the Open Calls Manager (eBOS). All proposals received will be checked against the Admissibility Criteria set out in the Guide for Applicants, which are as follows:

- **Submission system.** Proposals must be submitted through the online management system for the ENVELOPE Open Call. Other proposal submission methods will not be accepted.
- **Deadline.** Proposals must be submitted prior to the deadline of the call. Applications must be submitted by the call's closing time and date. As the submission time of the proposal, the time recorded by the Open Call management webpage shall be the official one. Late submissions will not be accepted.
- **English-language.** The established language for open calls is English. All required sections of the proposal must be in English for it to be accepted.

Additionally, proposals received will be checked against the Eligibility Check Criteria set out in the Handbook for Applicants (HoA), which are:

- **Type of Activity** (as described in Section 3.1 above). The use of the ENVELOPE Experimental facility is a compulsory requirement for all experimenters.
- **Type of Third Party** (as described in Section 4.2 above).
- **Established in an EU Member State and its Overseas Countries and Territories or Associated Country** (as described in Section 4.2 above)

4.3.3. IN/OUT Scope Screening Criteria

All proposals listed in the "List of Eligible Applications" will have their executive summaries and basic targets evaluated for the following criteria:

- **Scope.** The proposal's objectives have to be within the project's scope as outlined in the Handbook of Applicants. The experimenters must incorporate the ENVELOPE Experimental facility into key operations that illustrate the facility's advanced and creative capabilities in the relevant domain.
- **European Dimension.** As specified in the Guide for Applicants, the project must have a European dimension. Each proposal will be examined by a member of the Selection Committee (other than EBOS) and, once reviewed, the Selection Committee will meet to discuss the partners' evaluations and validate the ones suggested to be

excluded, establishing an "In Scope List".

4.4. Evaluation by External Experts

All proposals submitted during Open Call 1 will be evaluated using criteria similar to those of Horizon Europe, ensuring transparency, fairness, and objectivity. After passing the initial eligibility checks, each proposal was assigned to two independent external evaluators with relevant expertise. Proposals were scored based on three key criteria: **Excellence, Impact, and Implementation**.

4.4.1. Evaluation Criteria

EXCELLENCE will evaluate:

- **Ambition.** The candidates must demonstrate the extent to which their planned project contributes to the project's scope, has a European dimension, and advances the state of the art. The sub-project must describe its novel methodology. (e.g., ground-breaking objectives, novel concepts and approaches, new products, services or business and organisational models). Applicants must explain how the application of the ENVELOPE Experimental facility can improve internal processes in the use cases in areas such as enhancing data processing autonomy, portability, scalability, energy efficiency, and security, among others.
- **Innovation:** When submitting their application, individuals are expected to furnish details regarding the extent of novelty present in their field and the extent to which their proposed project differs from existing ones.
- **Soundness of the approach and credibility** of the proposed methodology.

IMPACT will analyse:

- **Market opportunity:** Applicants are required to exhibit a well-defined understanding of their proposed course of action and the potential marketability of their new or improved product or process, for instance, how it could effectively address a specific problem in a particular field. Additionally, they must showcase the potential of the ENVELOPE Experimental facility in their respective domains.
- **Commercial Strategy and Added Value:** It is required of applicants to showcase the value added by their new or improved product or process, which could involve commercialising it to address a systematic issue in a particular industry or procedure rather than a specific problem. Moreover, experimenters must exhibit the extra performance, power, portability, or scalability - at least in two dimensions - provided by their experiments in the particular domain.
- **Environmental and social impact:** Applicants must exhibit how their project can contribute to sustainable development goals and other European policies by demonstrating its impact on the environment, society, and the economy.

IMPLEMENTATION will consider:

- **Team:** Applicants are required to demonstrate their skills in management and leadership, including their ability to develop an idea from conceptualisation to market, their capacity to execute their plans, and their understanding of the market they intend to enter. The team should consist of individuals with diverse backgrounds and skillsets, and its gender balance should be taken into consideration.
- **Resources.** Provide evidence of the quality and efficacy of the allocated resources in achieving the proposed objectives and deliverables.

Evaluators will document their assessments in an evaluation form through the ENVELOPE Open Call Evaluation Dashboard, which was specifically developed to facilitate the evaluation process.

In the online system, the reviewers will evaluate the proposals and add scores and comments for each criterion.

4.4.2. Scoring System

Proposals will be scored on a scale from 0 to 5 for each criterion, using the following interpretations:

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

The minimum threshold for each criterion in each section is set at 3. The overall threshold, which applies to the sum of the three individual scores, is 10. The final score will be determined by averaging the individual evaluations provided by the Evaluators.

A consortium that includes a member from the SEE region among its applicants will receive an additional point added to its overall score (derived from the sum of the three individual criteria). In the event of a tie, the following criteria will be utilised to resolve the situation. The criteria in order of priority are:

- 1) The number of consortium partners from a SEE country.
- 2) The highest score attained in the Excellence Section.
- 3) The gender balance among the personnel responsible for carrying out the project activities.

4.5. Consensus Meeting Criteria

At this point, the Selection Committee, including the two external experts who participated in the Independent Evaluation and the internal Ethics Manager, will determine the "List of Finalists" and "Reserve List". Typically, the proposals with the highest ranking will be chosen for funding; however, the Selection Committee may have valid grounds for rejecting a particular third party. These grounds may include a lack of alignment with the ENVELOPE Project's goals and scope, limited potential for high impact, significant ethical concerns, or a potential conflict of interest. In such cases, the next-ranked proposal may be selected instead. The precise number of proposals approved for funding will be determined based on the overall quality of the proposals.

4.6. Contracting Process

To ensure a smooth contracting phase, the following steps were undertaken:

- **Drafting and Circulation of the SGA:** The SGA was prepared and sent to each selected beneficiary.
- **Review by Beneficiaries:** The beneficiaries were given time to review the contracts with their legal departments and provide comments or raise objections.
- **Resolution of Issues:** All comments and objections were addressed or discussed with the beneficiaries to ensure clarity and mutual agreement.
- **Finalisation and Signature:** Once finalised, the revised SGA was circulated for signature to all relevant parties, completing the contractual process.

4.6.1. Sub-Grant Agreements

Following the completion of the evaluation process, the SGA will be prepared and signed by each selected third-party sub-project. As described in **Section 3.5, Grants and Funding Distribution** and **Section 4.2 Funding Stages and Milestones** 4.3, the SGA operates under a lump sum funding model, ensuring that financial support is provided upon the delivery of expected outputs and the successful completion of milestones.

As all sub-projects involve consortia, the SGA (**Appendix 9: SGA**) will be signed by the consortium leader, who is responsible for managing the project and distributing funds.

Each SGA included, as an annex, the IMP tailored for the specific project. The IMP outlined:

- The **KPIs** and **deliverables** that would be assessed during the milestone reviews.
- The **budget** for the project, detailing the allocation of the lump sum across the three funding stages.
- A breakdown of the **dedication of resources** and a **detailed cost estimate** to ensure alignment between the lump sum and the actual costs incurred by the beneficiaries.

The "Selection Committee" will review and validate the "Mentors" proposal, paying special attention to "under threshold" cases, and taking into account possible objective reasons for underperformance, before making the final decision and approving payments.

4.7. Payment Process

For sub-projects with two beneficiaries, the payment is made to the assigned project coordinator, who is responsible for receiving and distributing the funds to the second beneficiary. This arrangement ensures streamlined financial management while maintaining accountability.

Each grantee that successfully completes a given stage will receive the corresponding grant payment. However, to ensure financial sustainability and avoid potential cash flow issues, the consortium reserves the right to defer the final payment for FSTP recipients if necessary.

This milestone-based payment structure ensures that funding is directly tied to measurable outcomes, incentivising grantees to achieve project objectives and deliver high-quality results.

4.7.1. Milestone Reviews

The **Milestone Reviews** are a critical component of the ENVELOPE Open Call 1 program, ensuring that third-party sub-projects meet their objectives, maintain quality, and adhere to timelines. These reviews occur at each payment stage, as outlined in the **IMP**, developed at the program's start in collaboration with the mentors allocated to each sub-project.

The performance of each beneficiary will be evaluated by the **Technical Mentors** and the **Technical Manager** during the Milestone Reviews, using the following criteria:

1. Deliverable Quality

- The quality of deliverables is assessed based on the outputs established in the **Individual Mentoring Plan**.

2. Technical Performance Indicators

- The technical performance is evaluated against the **KPIs** specified in the **Individual Mentoring Plan**.

3. Deadline Compliance

- Adherence to the deadlines outlined in the work plan is scored.

Each criterion is scored on a scale from **0 to 10**, and the final score is calculated using the following weights:

- **Deliverable Quality:** 30%
- **Technical Performance Indicators:** 60%
- **Deadline Compliance:** 10%

Beneficiaries must achieve a **minimum threshold of 7 points** in the Milestone Review to successfully proceed to the next stage of the program and receive their next payment. Beneficiaries scoring below 7 points are proposed by the Technical Mentors as candidates to leave the program. The 'Selection Committee' will review and validate the 'Mentors' proposal, with special attention to the cases that have not reached the threshold, by considering all possible objective reasons for underperformance, such as external factors that might have influenced the beneficiaries' performance. The 'Selection Committee' will make the final decision and approve the payments.

After the 'Selection Committee' approves the milestones and payments for each Grantee, the ENVELOPE Project Coordinator will transfer the corresponding portion of the FSTP budget to the 3rd parties on behalf of the ENVELOPE consortium. Every Grantee who completes a specific stage will be given the grant that corresponds to that stage. Nonetheless, to prevent any cash-flow difficulties, the Consortium may choose to delay the final grant payment that each FSTP recipient (third party receiving financial support) is entitled to. The final payment may be made after the action duration, which is after the project has ended. The payment amount will be known and considered as a debt in accordance with accounting regulations before the end of the project, thus, the cost will be borne by the consortium. All participants will be made aware of this prior to joining the Programme, and relevant provisions will be included in the sub-grant agreements.

5. CONCLUSIONS

The first phase of ENVELOPE Open Call 1 has been successfully concluded, attracting external third-party participants to contribute to the validation and enhancement of the project's experimental infrastructure.

The selected projects will enhance the capabilities of the ENVELOPE testbed, enabling advanced experimentation, validation, and optimisation of 6G technologies in real-world environments. Their integration will foster cutting-edge research and collaboration, bridging the gap between industry, academia, and technology providers.

The dissemination campaign played a crucial role in securing broad participation. A combination of webinars, dedicated website sections, and targeted outreach efforts helped maximise engagement from SMEs, RTOs, and industry stakeholders across Europe.

This deliverable comprehensively overviews the Open Call 1 process, including evaluation methodologies, selection criteria, and results. It also serves as a reference document, containing all essential guidelines and documentation in the Appendices, such as the Contracting Templates, Application forms, declarations of honour, etc.

OPEN CALL DOCUMENTS KIT OVERVIEW

The Open Call material is made available via 9 documents, included as annexes of the present report. Specifically, these include:

ANNEX 1: Bank Account form

Bank Account form – Bank Account details of the applicant in order to receive financial support.

Submitted as a merged document

ANNEX 2: Consortium Declaration

Consortium Declaration – Declaration to be signed by all members of the consortium to be funded regarding its alignment with the ENVELOPE practices and code of conduct.

Submitted as a merged document

ANNEX 3: Declaration of Honour

Declaration of Honour - includes the Declaration of Honour on exclusion criteria and absence of conflict of interest that the applicants need to read and sign, in order to proceed with the proposal submission process.

Submitted as a merged document

ANNEX 4: Feasibility Check

Feasibility Check - The document provides a structured template where the applicants will briefly describe the envisioned project costs and required resources for the consortium can assess in the earliest stages of the OC whether the proposed project is feasible.

Submitted as a merged document

ANNEX 5: Proposal Application Form

Proposal Application Form - The document provides a structured template that the applicants need to fill in order to successfully describe - among else - the envisioned project in terms of technical aspirations, costs and required resources submit their proposal along with the financial viability statement.

Submitted as a merged document

ANNEX 6: Sub Grant Agreement

Sub Grant Agreement - Agreement under a "lump sum model" to be signed by the consortium leader. The document will be accompanied by the "Individual Mentoring Plan" for each project where among other things, the KPIs and Deliverables that will be evaluated during the milestones review, as well as the budget for the project will be specified.

Submitted as a merged document

ANNEX 7: Handbook of Applicants

Handbook of Applicants - Describes the proposal's means of submission and eligibility criteria illustrating the open call submission, selection methodology and evaluation procedure that will lead to projects' selection.

Submitted as a merged document

ANNEX 8: Open Call Text

Open Call Text - Provides a background information of the ENVELOPE project and an overview of the Open Call with respect to the funding scheme and the projected timeline.

Submitted as a merged document



ENVELOPE: Evaluation and Validation of Connected Mobility in real Open Systems beyond 5GS

Open Call Bank Account Form

Coordinator Bank account information form

ACCOUNT HOLDER INFORMATION

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

Contact Person <i>It does not need to be an authorized agent.</i>		
Email		
Phone		
Mobile Phone		

BANK ACCOUNT INFORMATION

Bank Name	
Address	
Postcode	
Town/City	
Country	
IBAN number	
SWIFT code 8 to 11 characters	

BANK STAMP & SIGNATURE OF BANK REPRESENTATIVE <i>The bank stamp + signature of bank representative can be substituted by the attachment of a recent bank statement (less than 2 months).</i>		DATE + SIGNATURE OF ACCOUNT HOLDER (OBLIGATORY)	
--	--	--	--



ENVELOPE: Evaluation and Validation of Connected Mobility in real Open Systems beyond 5GS

OPEN CALLS

CONSORTIUM DECLARATION

Consortium Declaration

Title of the Project: _____

On behalf of _____ (Organization name) established in _____, (official address), VAT/TAX number _____, represented for the purposes of signing and submitting the Declaration by _____ (Name of legal representative), declares that all provided information in the scope of this Open Call is true and legally binding.

As the consortium leader, I, _____ (legal representative name) declare that all consortium partners have agreed on their roles and budget shares **and I am solely responsible to distribute the budget shares to Consortium partners in accordance to this Consortium Declaration.**

By signing this declaration, all consortium partners and all individuals participating in the proposal declare that:

1. ENVELOPE consortium bears no responsibility in case the Consortium coordinator/leader violates the mutual agreement set in this Consortium Declaration.
2. ENVELOPE Consortium bears no responsibility in case of dispute among consortium partners regarding IP rights.
3. The legal entities that we represent will not participate directly, indirectly or in any capacity to more than one accepted proposal submitted in the ENVELOPE Open Call #1.
4. There is no linked or associated entity participating to more than one accepted proposal submitted in the ENVELOPE Open Call #1. As indicative example, without excluding other cases, it is not allowed for two SMEs that are administratively associated or members of the same group to participate at two individual accepted proposals.
5. The legal entities of the application consortium do not have any formal relationship with any ENVELOPE consortium beneficiaries. As indicative example, without excluding other cases, it is not allowed any company or institution participating to the Open Call to be administratively associated or members of the same group with any ENVELOPE consortium member.
6. No legal entity or individual member of the Consortium team will participate, control, submit or **be** associated in any way with more than one accepted proposal. As indicative example, without excluding other cases, it is not allowed for a legal entity or individual to be in the project team of more than one accepted proposal. Moreover, it is not allowed for a legal entity or an individual to have a legal, administrative, technical, advisory or financial position or capacity in more than one applicant or is in the position to access or influence in any way more than one accepted proposal.
7. The legal entities have not received any other EU grant for this action or any similar action and will give notice of any future EU grants related to this action AND of any EU operating grant(s) given to their organisations.

In case, one of the above conditions are violated, both Consortia in their entirety will be excluded.

By submitting this document, Consortium accepts all the rules explained in the **“Guidelines for Applicants”** document.

1. Consortium Leader/Coordinator

Organization Legal Name	
Full address	
Legal representative name	
Type of organization (SME, University, Research Institution etc.)	
Total Project Requested Funding (max 300.000 €)	
Budget Share (max 60.000 €)	
Legal representative signature and stamp	

2. Consortium partner No 2

Organization Legal Name	
Full address	
Legal representative name	
Type of organization (SME, University, Research Institution etc.)	
Budget Share (max 60.000 €)	
Legal representative signature and stamp	

3. Consortium partner No 3

Organization Legal Name	
Full address	
Legal representative name	
Type of organization (SME, University, Research Institution etc.)	
Budget Share (max 60.000 €)	
Legal representative signature and stamp	

4. Consortium partner No 4

Organization Legal Name	
Full address	
Legal representative name	
Type of organization (SME, University, Research Institution etc.)	
Budget Share (max 60.000 €)	
Legal representative signature and stamp	

5. Consortium partner No 5

Organization Legal Name	
Full address	
Legal representative name	
Type of organization (SME, University, Research Institution etc.)	
Budget Share (max 60.000 €)	
Legal representative signature and stamp	



ENVELOPE: Evaluation and Validation of Connected Mobility in real Open Systems beyond 5GS

OPEN CALLS DECLARATION OF HONOUR

Declaration of Honour

Title of the Project: _____

On behalf of _____ (SME/Organization name)
established in _____, (official
address), VAT/TAX number _____, represented for the purposes of signing and
submitting the Declaration by _____ (Name of legal representative),
declares that all provided information in the scope of this Open Call is true and legally binding.

By signing this document, I declare that:

1. I have the power of legally binding the legal entity that I represent on submitting/participating in this proposal.
2. Neither the above-mentioned legal entity nor any linked legal entity nor any individual member of the proposal team will participate in any other accepted proposal under ENVELOPE Open Call. In case the above-mentioned legal entity or linked legal entity or individual member of the proposal team participates in more than one proposal that passed the feasibility check in this Open Call, the one that is considered best will be approved during the evaluation process and all associated proposals will be automatically excluded.
3. I and the above legal entity that I legally represent are fully aware and duly accept all ENVELOPE rules and conditions as expressed in ENVELOPE Open Call documents and will fully respect any evaluation decision and proposal selection. Failure to follow the rules defined in the Open Call documents and the Annexes will result in automatic rejection of this application in its entirety.
4. In case of SME, the information included in the '**SME Financial Viability Declaration**' document is true and legally binding. (Section F of Application Form)
5. I declare that the mentioned legal entity is not in one of the following situations:
 - Is bankrupt or being wound up, is having its affairs administered by the courts, has entered 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.
 - It or the 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.
 - Has been guilty of grave professional misconduct proven by any means that the contracting authority can justify, including by decisions of the European Investment Bank and international organizations.
 - 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, to be proved by the deliverance of official documents issued by the local authorities, according to the local applicable rules.
 - 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.
- 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.
6. I declare that neither myself nor any natural persons with power of representation, decision-making or control over the above-mentioned legal entity are in the situations referred to in points (a) to (f) above.
 7. I declare that:
 - a) Neither myself nor any person that I know is subject to an ENVELOPE conflict of interest.
 - b) I have not made false declarations in supplying the information required by participation in the ENVELOPE Open Calls or does not fail to supply this information.
 - c) Neither myself nor any person that I know participates, controls, submits or is associated in any way with more than one accepted proposal in the Open Call.
 8. I certify that the legal entity that I represent:
 - Is committed to participate in the abovementioned project.
 - Has or will have the necessary resources as and when needed to carry out its involvement in the above-mentioned project.
 9. I give the consent and permission to the ENVELOPE Project coordinator to use the attached information to contact me for any issue associated with the above application.
 10. I declare that: I/my organisation have not received any other EU grant for this action or any similar action and will give notice of any future EU grants related to this action AND of any EU operating grant(s) given to my organisation.
 11. All provided information in this declaration is true and legally binding.

Entity Legal representative contact information:

Title (Mr, Mrs, Dr.)	
Name	
Surname	
Position in the legal entity	
Full Address	
Country	
Email Address	
Telephone	
Mobile	
Signature, Date, stamp	



ENVELOPE: Evaluation and Validation of Connected Mobility in real Open Systems beyond 5GS

Open Call 1: Feasibility Check Form

Full Title of your proposal /Acronym of your proposal (optional)

Main target of proposal / ENVELOPE's Site of primary interest	
Date of proposal:	DD/MM/2023
Coordinator and partner organisation(s) name(s):	Your organisation(s) name(s)
Organisation(s) legal status	(SME, RTO etc)
PIC number(s)	
Name of the coordinating person:	Name of the coordinating person
Coordinator telephone number:	Coordinator telephone number
Coordinator email:	Coordinator email
ENVELOPE Trial Site of interest	
ENVELOPE API(s) of interest	

Note: Proposal applications that pass the feasibility check are required to submit this document when registering to the OC and its final version when submitting their final proposal through the online ENVELOPE open calls system.

Section 1: Project Summary and Description

Project Summary

(Maximum 500 words – summary of the proposed work, Please include here goals, objectives, identify preferred facility(ies). Please provide detailed information so that the project can be understood. The information in this section will be treated confidentially and will not be used in public documents and reports by the ENVELOPE consortium.)

Section 2: Additional Criteria *(to be completed by the applicant)*

1.1. Budget Estimate and Justification: *[Insert budget details and justification]*

1.2. Risk Assessment: *[Identify potential risks and propose mitigation strategies]*

1.3. Project Timeline: *[Review the proposed timeline for feasibility and appropriateness]*

Section 3: Requested ENVELOPE Resources

Please select the resources you intend to utilize from our facilities and provide a justification for each chosen resource. Explain why these specific resources are necessary for your proposed experiment/project and specify the quantity required. Additionally, indicate when (including the duration) and how you plan to conduct experiments on our platform, including details regarding volume and duration.

Resources	Justification

Section 4: Feasibility Check results *(to be completed by the evaluator)*

- 1.1. Date Feasibility Check Completed:** *[Insert Date]*
- 1.2. Is the Document Formally Completed?** *Yes, all information is found/No, information is missing*
- 1.3. Compatibility with ENVELOPE Infrastructure:** *Compatible/Incompatible (Provide comments if needed).*
- 1.4. Functionality Validation:** *The initial proposal makes sense and is in line with what the facility is expecting/ The initial proposal is not in alignment with what the facility is expecting.*
- 1.5. Alignment with ENVELOPE Technical Objectives:** *Yes/No*
- 1.6. Innovation and Impact:** *High/Medium/Low (Provide comments if needed)*
- 1.7. Budget Estimate and Justification:** *[Insert budget details and justification]*

1.8. Risk Assessment: *[Identify potential risks and propose mitigation strategies]*

1.9. Project Timeline: *[Review the proposed timeline for feasibility and appropriateness]*

1.10. Results: *Passed/Failed*

1.10.1. If Feasibility Passed: *Provide a short report on the successful feasibility check, including any recommendations made to the proposers.*

1.10.2. **If Feasibility Failed:** *Provide a short report on the failed feasibility check, including any recommendations made to the proposers.*

Feasibility check completed by: *[Enter Full Name], [Enter Organization]*

ENVELOPE OPEN CALL #1

..... 2025
Deadline: 31/ 07/ 2025

APPLICATION FORM

INSTRUCTIONS

Please read carefully before starting your proposal:

Please **use this template for the preparation of your proposal**, as it has been structured to ensure that the crucial aspects of your planned work can be objectively evaluated according to the established criteria. Each section within the template corresponds to an evaluation criterion (for more information, refer to the "Guide for Applicants" available at the ENVELOPE's website)

It is essential to adhere to the structure of this template when creating your proposal, as any use of alternative templates or document structures will result in automatic disqualification. Only proposals that will effectively address all the required elements outlined in the template will be considered for evaluation.

Please take note of the specified limits mentioned below the title of each section as guidance. Tables are permitted and should be included within the specified page limit. The minimum font size allowed is 11 points (tables may utilize a font size of 10 points). The page size should be A4, and all margins (top, bottom, left, right) should remain unchanged from their current settings. Maintain a minimum paragraph spacing of 0pt before/after and a line spacing of 1pt. To ensure ease of readability, it is recommended to use Calibri as the font style and black as the font color.

Please be aware that if your proposal exceeds the specified page limit, the evaluating experts will not consider any excess pages.

The rules for participation and funding in the Open Calls are subject to the General Annexes to Horizon Europe for the Work Program 2024-2025¹.

¹ [wp-13-general-annexes horizon-2023-2024 en.pdf \(europa.eu\)](https://europe.europa.eu/en/policy-areas/horizon-europe/wp-13-general-annexes-horizon-2023-2024-en.pdf)

Section A: Project Summary

Description

- *General description of the use case*
- *Supporting facilities*
- *Relevance for the addressed market*

(Maximum 2 pages)

Problem(s) to be solved/challenges.

- *Challenges and goals of the presented use case and trial*

(Maximum 2 pages)

Functional Requirements and Key Performance/Value Indicators (KPIs, KVIs)

- *Functional requirements in text, KPIs/KVIs will be provided in a table format (*see following annex, link with 5G KPIS description)*

(Maximum 2 pages)

Remark: The information in this section may be used in public documents and reports by the ENVELOPE consortium.

Section B: Detailed description and expected results

(Maximum 10 pages)

Please describe the details of the planned experiment: what does the experimenter hope to obtain, how, and why is it relevant? This section should also include all information with respect to the State-of-the-Art or comparison to competing commercial solutions in case of experiments targeting 'industrial innovation' to show the innovative character of the experiment and the expected scientific or business impact.

A. EXCELLENCE

The Excellence will be evaluated according to the following criteria:

- A. **Ambition.** The candidates have to demonstrate the extent to which their planned project contributes to the project's scope, has a **European dimension**, and **advances the state of the art**. The sub-project must describe its novel methodology. (e.g. ground-breaking objectives, novel concepts and approaches, new products, services or business and organizational models). Applicants must explain how the application of the ENVELOPE Experimental facility can improve internal processes in the use cases in areas such as enhancing data processing autonomy, portability, scalability, energy efficiency, and security, among others.
- B. **Innovation:** When submitting their application, individuals are expected to furnish details regarding the extent of novelty present in their field and the extent to which their proposed project differs from existing ones.
- C. **Soundness of the approach** and credibility of the proposed methodology.

B. Impact

The Impact will be evaluated according to the following criteria:

1. **Market opportunity:** Applicants are required to exhibit a well-defined understanding of their proposed course of action and the potential marketability of their new or improved product or process, for instance, how it could effectively address a specific problem in a particular field. Additionally, they must showcase the potential of the ENVELOPE Experimental facility in their respective domains.
2. **Commercial Strategy and Added Value:** Applicants must showcase the value added by their new or improved product or process, which could involve commercializing it to address a systematic issue in a particular industry or procedure rather than a specific problem. Moreover, experimenters must exhibit the extra performance, power, portability, or scalability - at least in two dimensions - provided by their experiments in the particular domain.
3. **Environmental and social impact:** Applicants must exhibit how their project can contribute to sustainable development goals, and other European policies by demonstrating its impact on the environment, society, and the economy.

C. IMPLEMENTATION

Quality of the implementation: The quality and the efficiency of the implementation will be evaluated according to the following criteria:

1. Coherence and effectiveness of the work plan, including timelines, deliverables and milestones.

2. *Appropriateness of the allocation of tasks and resources, justification of resources in order to get the objectives/deliverables proposed.*
3. *Appropriateness of the skills and experience of the project delivery team. Complementary skill sets of the team (where there is more than one partner) including skills in management and leadership, their ability to develop an idea from conceptualization to market, their capacity to execute their plans, and their understanding of the market they intend to enter. The team should consist of individuals with diverse backgrounds and skillsets, and its gender balance should be taken into consideration.*

Table 1: Suggested table for description of activities

<i>Workplan activity</i>	<i>Activity description</i>	<i>Planned duration</i>	<i>Expected output</i>
<i>Activity 1</i>			
<i>Activity 2</i>			
<i>Activity 3</i>			

Table 2: Suggested table for description of milestones

<i>Milestone name</i>	<i>Milestone description</i>	<i>Delivery month</i>
<i>Milestone 1</i>		
<i>Milestone 2</i>		
<i>Milestone 3</i>		

Section C: Requested ENVELOPE Resources

(Maximum 1 page)

Please provide more information on why specific resources will be required from the ENVELOPE facility for the proposed experiment or extension. Please also specify when and how you will be running experiments on the platform.

Section D: Proposers Profile and Capabilities

(Maximum 2 page)

Please, describe your organization, capabilities, resources, expertise. etc. that may ensure the success of the field trials. Please include also:

- *Type of organization*
- *Number of employees*
- *Short CVs of relevant personnel*

The applicants have to demonstrate their management and leadership qualities, their ability to take a concept from ideas to market, their capacity to carry through their ideas and understand the dynamics of the market they are trying to tap into. The team should be a cross-functional team, with a strong background and skills bas.

All Open Call projects will be expected to comply with the General Data Protection Regulation 2016/679 (GDPR²).

² <https://eur-lex.europa.eu/EN/legal-content/summary/general-data-protection-regulation-gdpr.html>

Section E: Requested Funding

(Maximum 2 pages per partner)

This section provides an overview of the budgeted costs and the requested funding. A split is made in personnel costs, other direct costs (travel, equipment, etc.) and indirect costs. For proposals that have 5 distinct organizational participants, please clearly indicate the distribution of the costs between the participants.

Type of Application: Are you applying as a single applicant (Option 1) or as a consortium/team of up to 5 members (Option 2)?

1 Beneficiary: Maximum budget 60,000 euros over 6 months.

>1 Beneficiaries: Maximum budget is 300,000 euros over 6 months

Organization #1 details	
Legal name	
Address	
Country	
Legal status	
Website link	
PIC ³	

Organization #2 details	
Legal name	
Address	
Country	
Legal status	
Website link	
PIC ³	

³ <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/how-to-participate/participant-register>

Organization #3 details	
Legal name	
Address	
Country	
Legal status	
Website link	
PIC ⁴	

Organization #4 details	
Legal name	
Address	
Country	
Legal status	
Website link	
PIC ⁴	

Organization #5 details	
Legal name	
Address	
Country	
Legal status	
Website link	
PIC ⁴	

⁴ <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/how-to-participate/participant-register>

Section F: Feasibility Check

In this section the proposing party is asked to include the Financial Viability Simulation statements (Required only for SMEs).

<https://ec.europa.eu/research/participants/lfv/lfvSimulation.do>

Section G: Use of proposal information

In this section the proposing party is asked to include some statements related to sharing information of the proposal within the ENVELOPE consortium as well as agreeing to the sub-grant agreement if the proposal is successful.

<i>By submitting an application, I allow that the material provided in Sections A, C, D and F of this proposal will be retained by the ENVELOPE consortium, even if the proposal is not selected for funding. This information will be used in an aggregated and anonymous way, to create participation statistics and reports about the ENVELOPE open calls.</i>	YES
<i>Furthermore, I allow that the other parts of this proposal may be accessed by the ENVELOPE consortium, also if the proposal is not selected for funding. In any case, the ENVELOPE consortium will treat all information of this proposal confidentially. Any use of this information will be discussed and agreed upon with the proposers.</i>	YES
<i>When submitting an application, I confirm that my organization has downloaded, read, and understood the sub-grant agreement (available at the project's website) and agree there will be no negotiations on the terms of this subgrant agreement if our proposal is accepted for fund.</i>	YES

Section H: Ethics

In this section the proposing party is asked to include some statements related to ethics and explain in detail the ethics self-assessment.

Does this activity involve human participants?	YES/NO
Does this activity involve the processing of personal data?	YES/NO
Does it involve profiling, systematic monitoring of individuals, or processing of large-scale of special categories of data or intrusive methods of data processing (such as surveillance, geolocation tracking etc.)?	YES/NO
Does this activity involve further processing of previously collected personal data (including the use of preexisting data sets or sources, merging existing data sets)?	YES/NO
Will any the activities be carried out in non-EU countries?	YES/NO
Does the proposed work involve the development, deployment and/or use of Artificial Intelligence? (if yes, detail in the self-assessment whether that could raise ethical concerns related to human rights and values and detail how this will be addressed).	YES/NO
When submitting an application, I confirm that I have taken into account all ethics issues above and that, if any ethics issues apply, I will complete the ethics self-assessment.	YES/NO

Ethics Self-Assessment

<i>Ethical dimension of the objectives, methodology and likely impact.</i>
<i>(Maximum 2500 characters)</i>
<i>Compliance with ethical principles and relevant legislations</i>
<i>(Maximum 2500 characters)</i>

ANNEX 1 - Key Performance Indicators (KPIs)

	KPI - Name	Description	Target Values (min – max)	
1				
2				
3				
4				

Table 3: Main KPIs Identified in Proposed Research Projects

Contract between <PROJECT'S PARTNER> and <EU PARTNER LEGAL NAME>
For financial support to third parties under Article 9 of Grant Agreement
number 101139048 — ENVELOPE

THIS CONTRACT is made between:

- (1) <PROJECT'S PARTNER> - whose legal address is <ADDRESS> (hereinafter called "<PROJECT'S PARTNER>")

And

- (2) <EU Partner Legal Name>, <Full address> (hereinafter called "PARTNER")

who shall be the "Parties" to this Contract:

WHEREAS <PROJECT'S PARTNER> is a partner of project "ENVELOPE: Evaluation and Validation of Connected Mobility in real Open Systems beyond 5GS", that receives European Union funding under Horizon Europe Grant Agreement number 101139048 – ENVELOPE, and

WHEREAS ENVELOPE has reserved funds to provide financial support to third parties under Article 9 of Grant Agreement¹ number 101139048 — ENVELOPE through an open call process, and

WHEREAS <PROJECT'S PARTNER> is the one of the beneficiaries in Grant Agreement number 101139048 –ENVELOPE authorized to contract the third parties who are successful in the ENVELOPE open call process, and

WHEREAS PARTNER is a third party receiving financial support for the research project submitted as DoW to the ENVELOPE Open Call No. <#> hereto ("Work") and which is critical to the success of the delivery of research work under the aforementioned Grant Agreement; and the work of this project must be performed within the timeframe and deadlines of the ENVELOPE' Open Call <#>.

<PROJECT'S PARTNER> and PARTNER now agree the following Contract for performance of research by PARTNER as part of the aforementioned Grant Agreement.

¹ [aga_en.pdf \(europa.eu\)](#)

Contract between <PROJECT'S PARTNER> and <EU PARTNER LEGAL NAME>
for financial support to third parties under Article 9 of Grant Agreement
number 101139048 — ENVELOPE

The Contract:

1 Definitions

In this Contract and unless the context requires otherwise, the following words and phrases shall have the meanings detailed below:

"Contract" shall mean this Contract, together with its annexes and any modifications agreed in writing by the Parties.

"Grant Agreement" means Horizon Europe Grant Agreement 101139048 for project ENVELOPE as awarded to <PROJECT'S PARTNER> and all the additional beneficiaries, which follows the Horizon Europe Model Grant Agreement, whose latest annotated full version can be found [here](#)² for further reference ting by the Parties.

"Work" shall mean any work carried out or to be carried out under this Contract as specified in the "Description of Work" in Annex 1 to this Contract, and any modifications to that agreed between <PROJECT'S PARTNER> and the PARTNER.

"Description of Work" is the description of the tasks as presented in Annex 1 to this Contract.

"Research" shall mean the items or services specified as such in the Scope of Work.

"Results of the Work" shall mean any direct results of performing the Work.

"Individual Mentoring Plan [IMP]" shall mean the document that establishes the individual budget, KPIs, Deliverables and a schedule that will be taken into account when evaluating the Grantees' performance at the Milestones Review (See Annex 1&2).

"Milestone Review" shall mean the evaluation of grantees' performance by the ENVELOPE consortium established every time a payment is due, according to the established criteria.

"IPR" shall mean any intellectual property right (including know-how) in any form, e.g., invention, copyright (including software), patent of any description, trademark, trade dress, domain name, registered design right, design right and any registered protection for any of the foregoing including any application for such protection.

"Foreground" shall mean IPR generated pursuant to the performance of the Work and includes the Results of the Work.

"Background" IPR shall mean that which is not Foreground.

2 Effectiveness of this Contract

The start date of this Contract shall be <sub-project start date> and shall be made effective by signature by both Parties.

3 Terms and Conditions

² [unit-mga_he_en.pdf\(europa.eu\)](#)

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In addition to the terms and conditions of this contract, the terms and conditions of the Horizon Europe Grant Agreement number 101139048 –ENVELOPE under which the work is performed also apply mutatis mutandis to this **Contract** to ensure that the European Commission (EC) the European Court of Auditors (ECA) and the European Anti-Fraud Office (OLAF) can exercise their rights under Articles 25 and 20 of the Model Grant Agreement towards **PARTNER**. Furthermore, the obligations of the **PARTNER** include the obligations under articles 12, 13, 14, 17, 18, 19 and 33. In case of any conflict between the provisions of this **Contract** and those of the Grant Agreement, those of the Grant Agreement shall take order of precedence.

The above referenced articles of the Grant Agreement cover:

- **Article 12 – Conflict of interest**
 - Obligation to avoid a conflict of interests
 - Consequences of non-compliance
- **Article 13 – Confidentiality**
 - Sensitive information
 - Classified information
 - Consequences of non-compliance
- **Article 14 – Ethics and values**
 - Ethics
 - Values
 - Consequences of non-compliance
- **Article 17 – Communication, Dissemination and Visibility**
 - Communication activities by beneficiaries
 - Visibility of EU funding
 - Consequences of non-compliance
- **Article 18 – Specific rules for carrying out the action**
 - Specific rules for carrying out the action
 - Consequences of non-compliance
- **Article 19 – General Information obligations**
 - Requests for information
 - Information about events and circumstances which impact the action
 - Consequences of non-compliance
- **Article 25 – Checks, reviews, audits and investigations — Extension of findings**
 - Granting authority checks, reviews and audits
 - European Commission checks, reviews and audits in grants of other granting authorities
 - Access to records for assessing simplified forms of funding
 - European Anti-Fraud Office (OLAF), European Public Prosecutor's Office (EPPO), European Court of Auditors (ECA) audits and Investigations
 - Consequences of checks, reviews, audits and investigations — Extension of results of reviews, audits or investigations
 - Consequences of non-compliance
- **Article 33 – Liability for damages**
 - Liability of the EC
 - Liability of the beneficiaries

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If the project team is composed of two partners, the **PARTNER** must ensure that its obligations under this Agreement also apply to the second Project partners. In addition, the **PARTNER** must ensure that the Project partners have internal arrangements regarding their operation and co-ordination to ensure that the Project is implemented properly. These internal arrangements must be set out in a written 'consortium agreement' between the partners, which may cover:

- legal representation
- internal organisation of the project team
- distribution of financial support
- intellectual property rights

4 Performance

4.1 PARTNER shall perform its work under this Contract in accordance with the requirements of the Description of Work.

4.2 PARTNER shall endeavour to ensure that all Work is performed to the highest professional standards and shall be responsible for the quality and timeliness of its research under this Contract.

4.3 PARTNER will perform its research according to the following standards:

- (i) PARTNER and <PROJECT'S PARTNER> must be available during normal working hours to discuss the work in progress and respond to technical and/or administrative requests
- (ii) The Personnel offered for the performance of the work must have the necessary competence to perform the work and must be announced in advance to <PROJECT'S PARTNER>

5 Forwarding of Funds

<PROJECT'S PARTNER> as a grantee of an EU funding is forwarding parts of the funding to PARTNER. The objective of the funding is to enable research for the benefit of the general public.

The forwarded sum and the payment terms, shall be as specified by the payment plan in Annex 2 to this CONTRACT.

Notwithstanding the commitments in the payment plan, Payments will only be done by <PROJECT'S PARTNER> subsequent to receiving the corresponding funding from the European Commission.

As with all Horizon Europe projects, the final 15% payment will only be paid after the completion and approval of all Work of the Project by the European Commission. PARTNER shall strictly abide by all Horizon Europe provisions concerning reporting, cost calculations and invoicing, and adhere to all instructions contained in Horizon Europe Annotated Model Grant Agreement³ when completing its invoices.

³ [unit-mga_he_en.pdf \(europa.eu\)](#)

6 Scientific Standards

6.1 PARTNER shall perform the research as defined in the Description of Work.

6.2 After reception of part or all of the research as defined in the Description of Work, <PROJECT'S PARTNER> may the PARTNER to revise the research to reach the agreed standards as per Description of Work. Failure to supply the work or service to a satisfactory standard, as per clause 4.2, by the final date for that task as set out in the Description of Work shall oblige <PROJECT'S PARTNER> to withhold corresponding payment and/or claim back the respective part of the advance payment. In the case where part or all of the research has not been supplied to the standard required and an opportunity to revise has not been successful, PARTNER undertakes to return any payment or prepayment received for this research within 30 days.

All reports must be drawn up using the forms and templates provided by the <PROJECT'S PARTNER>. All reports and deliverables, when appropriate, required by this Contract shall be in English.

7 Intellectual property Rights

PARTNER ensures full compliance with all IPR provisions under the Horizon Europe Model Grant Agreement.

PARTNER shall take all reasonable precautions to avoid the inclusion of third party IPR in the Results of the Work, and to avoid making the use of the Foreground subject to third party IPR, and to avoid giving advice the following of which would result in the infringement of third party IPR.

PARTNER ensures that the supply and use of their Personnel and performance of research in accordance with this Contract does not and will not wilfully infringe any IPR belonging to <PROJECT'S PARTNER>, and/or any of the ENVELOPE beneficiaries or any third party.

As Horizon Europe Model Grant Agreement shall apply, IPR to the Results of the Work generated by the PARTNER shall be owned by the PARTNER as specified in article 16 of Horizon Europe Model Grant Agreement. In the event of multiple partners, the allocation and terms of exercise of any joint ownership of results arising between the partners will be agreed in writing between themselves to ensure compliance with the Grant Agreement.

7.1 Dissemination of Results

PARTNER has the unlimited right to publish the Results of the Work

7.2 Use of Results

<PROJECT'S PARTNER> and the ENVELOPE consortium, retain rights to the use of the Results of the Work for use in provisioning and providing test-bed facilities and promotional material.

8 Confidentiality

All information in whatever form or mode of communication, which is disclosed by a Party (the "Disclosing Party") to any other Party (the "Recipient") in connection with the Project during its implementation and which has been explicitly marked as "confidential" at the time

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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"

8.1 The Recipients hereby undertake in addition and without prejudice to any provisions of the Grant Agreement, for a period of 4 years after the end of the Project:

- Not to use Confidential Information otherwise 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; and to return to the Disclosing Party, or destroy, on request all Confidential Information that has been disclosed to the Recipients including all copies thereof and to delete all information stored in a machine-readable form to the extent practically possible.

The Recipients 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 comply with the confidentiality obligations herein contained with respect to such copy for as long as the copy is retained.

8.2 The Recipients shall be responsible for the fulfilment of the above obligations on the part of their employees or third parties involved in the Project and shall ensure that they remain so obliged, as far as legally possible, during and after the end of the Project and/or after the termination of the contractual relationship with the employee or third party.

8.3 The above 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 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 Disclosing Party subsequently informs the Recipient that the Confidential Information is no longer confidential;
- 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, or
- the Recipient is required to disclose the Confidential Information in order to comply with applicable laws or regulations or with a court or administrative order, subject to the provision Section 10.7 hereunder.

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- 8.4 The Recipient shall apply the same degree of care with regard to 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.
- 8.5 Each Party shall promptly advise the other Party in writing of any unauthorised disclosure, misappropriation or misuse of Confidential Information after it becomes aware of such unauthorised disclosure, misappropriation or misuse.
- 8.6 If any Party becomes aware that it will be required, or is likely to be required, to disclose Confidential Information in order to comply with applicable laws or regulations or with a court or administrative order, it shall, to the extent it is lawfully able to do so, prior to any such disclosure to notify the Disclosing Party, and comply with the Disclosing Party's reasonable instructions to protect the confidentiality of the information.

9 Liabilities

- 9.1 PARTNER shall use all reasonable endeavours to ensure the accuracy of any information it supplies under this Contract and shall be responsible only for any direct loss or damage arising out of any inaccuracies or omissions, which are the result of its wilful intent.
- 9.2 PARTNER shall promptly notify <PROJECT'S PARTNER> of any claim arising relevant to 9.1. <PROJECT'S PARTNER> cannot be held liable for any damage caused to the beneficiaries or to third parties as a consequence of implementing the Agreement, including for gross negligence. <PROJECT'S PARTNER> cannot be held liable for any damage caused by any of the beneficiaries or third parties involved in this action, as a consequence of implementing the Agreement.
- 9.3 PARTNER shall promptly notify <PROJECT'S PARTNER> of any claim arising from their performance of the work where a third party alleges harm has been caused by the actions of PARTNER in performing this contract. <PROJECT'S PARTNER> cannot be held liable for any damage caused to the beneficiaries or to third parties as a consequence of implementing the Agreement, including for gross negligence. <PROJECT'S PARTNER> cannot be held liable for any damage caused by any of the beneficiaries or third parties involved in this action, as a consequence of implementing the Agreement.
- 9.4 PARTNER's overall liability under this contract is limited to the value of PARTNER's share of this contract, except for damages caused by wilful intent.
- 9.5 Upon request, PARTNER shall inform <PROJECT'S PARTNER> on the essential terms and conditions of its employer's liability insurance.
- 9.6 Should in the execution of the CONTRACT a need arises to provide the European Commission or the ENVELOPE beneficiaries with information which is subject to export control laws and regulations that originates from PARTNER, PARTNER shall notify <PROJECT'S PARTNER> to secure that such information is only provided in accordance with the provisions of such export control laws and regulations.

10 Term and Terminations

- 10.1 This Contract starts on <sub-project start date> and it shall terminate no later than the end date of the project as foreseen in Annex 1. In the case Grant Agreement 101139048 – ENVELOPE is terminated earlier than planned, this Contract will also be terminated and work

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items and payments will be finalised in line with the European Commission decision to terminate the Grant Agreement 101139048 for the ENVELOPE project.

10.2 If either party breaches any conditions of this Contract and fails to remedy such breach within thirty days after receipt of a written notice from the other party, the party giving notice may, at its option and in addition to any other remedies that it may have, terminate this Contract by sending notice of termination in writing to the other party and such termination shall be effective as the date of the receipt of such notice, and any benefits of the Contract in respect of the other party shall cease.

10.3 Notwithstanding termination or cessation of this Contract, clauses 7, 8 and 9 shall remain in force.

11 Force Majeure

If any party is rendered unable by circumstances of Force Majeure to fulfil any of its obligations under this CONTRACT, such party, by giving notice and reasonably full particulars to the other party promptly after the occurrence of such Force Majeure, shall be excused from the performance of such obligations during the continuance of such inability so caused, so far as and to the extent that the obligations are affected by such Force Majeure, that such party shall be relieved of the liability for failure to fulfil the same during such period provided that the cause of such inability shall be remedied so far as is possible with reasonable despatch. For the purpose of this Contract, the term "Force Majeure" means an occurrence beyond the control of the party affected and which, by acting in a reasonable and prudent manner, said party is unable to prevent such as acts of God, state of war, riot, epidemics, atmospheric disturbance, lightning, storm, hurricane, earthquake, landslide, strikes and lock-outs.

12 Amendments, Variation

Amendments or variations of this Contract or any of the rights or obligations of <PROJECT'S PARTNER> or PARTNER herein shall only be effective when expressed in writing and signed by the duly authorised representatives of both Parties.

13 Waiver

No delay, neglect or forbearance in enforcing against any term or condition of this Contract shall be deemed to be a waiver or in any way prejudice any rights under this Contract unless in writing and signed by the Parties.

14 Enforceability

The invalidity or unenforceability for any reason of any provision of this Contract shall not prejudice the validity or enforceability of the remainder. The Parties shall seek to agree an amendment of this Contract such that the amended contract has as near as possible the same effect as intended in the original Contract.

15 Notice

Any notice to be given under this Contract may be first sent as a PDF file attached to an eMail and must be acknowledged by the receiving party on receipt. If not acknowledged by eMail, then it shall be forwarded by letter post to the addressee at its business address as last notified in writing to the other party.

The PARTNER must immediately inform <PROJECT'S PARTNER> of any of the following:

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- change of contact person(s) and/or contact details of the Partner;
- events which are likely to affect significantly or delay the implementation of the Project or delivering the Project's goals or the Commission's financial interests, in particular changes in its legal, financial, technical, organisational or ownership situation;
- circumstances affecting the decision to award the financial support or non-compliance with requirements under this Agreement.

Any communication or request concerning this Agreement shall identify the PARTNER agreement number, the nature and details of the request or communication and be submitted to the following addresses:

For the <PROJECT'S PARTNER>:

Name:

Address: <Full address>

Email: <contact email>

Phone: <contact phone>

For the PARTNER:

Name: <PI name>

Address: <EU PARTNER legal name>, <Full address>

Email: <PI contact email>

Phone: <PI contact phone>

16 Relationship of the Parties

Nothing in this Contract shall be construed as establishing or implying any partnership or joint venture between the Parties hereto and nothing in this Contract shall be deemed to constitute either of the Parties hereto as the agent of the other or authorise either party:

- i) to incur any expense on behalf of the other party;
- ii) to enter into any engagement or make any representation or warranty on behalf of the other party;
- iii) to pledge the credit of or otherwise bind or oblige the other party; or
- iv) to commit the other party in any way whatsoever without in each case obtaining the prior written consent of the party concerned.

The sole exception to this section is where such an action is foreseen and the conditions allowing it are described in the scope of the work (Annex 1).

17 Assignment

This Contract shall not be assigned or transferred by either party except with the written consent of the other party.

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18 Applicable Law

This Contract shall be governed by and construed in all respects by the laws of Greece. The Court of jurisdiction is Athens, Greece.

19 Dispute Resolution

19.1 <PROJECT'S PARTNER> and PARTNER will attempt to settle any claim or controversy arising out of it through consultation and negotiation in good faith and a spirit of mutual cooperation.

19.2 All disputes arising out of or in connection with this Contract, including any question regarding its existence, validity or termination, shall, unless amicably settled between the Parties, be finally settled by arbitration according to the ICC (International Chamber of Commerce) Rules of Arbitration ("RULES"). Arbitration proceedings shall take place in Athens, Greece, and the language of the proceedings shall be English.

20 Headings

The headings used for the terms and conditions in this Contract are for reference purposes only and shall not affect the construction of the Contract.

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<PROJECT'S PARTNER> and **PARTNER** now agree the above Contract for the performance of research
by PARTNER under the aforementioned Grant Agreement 101139048 for project ENVELOPE

Signed for and on behalf of PARTNER

.....

<signatory name>

<signatory title>

Date.....

Signed for and on behalf of <PROJECT'S PARTNER>

.....

Date.....

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ANNEXES:

Annex 1 to this Contract: The agreed Description of Work (DoW) and Individual Mentoring Plan (IMP)

The DoW is based on the Partners' proposal including any adjustments agreed in the contracting phase e.g. timing of deliverables.

Description of work is provided in the attached proposal <proposal title> submitted to the ENVELOPE Open Call <#>.

End of Annex 1

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Annex 2 to this Contract: Payment plan and working practices for the above DoW

The payment plan will cover any payments(s), including interim payments based on achievements/deliverables, the final payment and any other financial conditions. This annex also presents the standard ENVELOPE project requirements for contributions to management, reporting, attending meetings and providing deliverables.

Annexes to this Contract not attached hereto, but available to both Parties, when project is deemed successful.

1) Maximum financial support for the PARTNER: €....

2) Mandatory deliverables to be provided by the PARTNER:

- D1 – <D1 DUE DATE> – Detailed experiment description and implementation / execution plan (Confidential);
- D2 – <D1 DUE DATE> – Final report and experiment results (Public).

3) Payment plan:

The EU contribution that each third-party project can receive is calculated based on a **lump sum scheme**.

The criteria for calculating the exact amount of financial support to be granted to each third-party sub-project is based on the application of the standard rates foreseen in the *Horizon Europe* during the time estimated for executing the funded projects. The detail on how the exact amount to be granted to each third-party project is estimated is included in *Section 3.1 "EU Funds per third party projects"*. This amount will be distributed based on the accomplishment of the expected Deliverables established for each Stage in the SubGrant Agreement.

The exact amount of financial support to be granted to each sub-project is **up to €300.000** per consortium, split as follows per stage:

	Stage duration	Deliverable	Fixed lump sum
Stage 1 Definition	1 month	Individual mentoring plan and definition of work	Up to €45.000 (15%)
Stage 2 Implementation	4 months	Report on sub-project implementation	Up to €210.000 (70%)
Stage 3 Evaluation and feedback	1 month	Project implementation report and feedback on findings	Up to €45.000 (15%)
TOTAL	6 months		Up to €300.000

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4) Reporting

- Intermediate report on usage of the PARTNER's resources to fulfil this contract (number of person months spent, personnel and other costs, as well as related indirect costs) for first half period of the project must be provided to the ENVELOPE partner <PROJECT'S PARTNER> until <D1 due date>.
- Final report on usage of the PARTNER's resources for entire duration of the contract until <D2 due date>.
- The final report must be accompanied by corresponding request for payment from the PARTNER and evidence the money has been spent.
- Allowable Costs categories are dependent on the project type and will be filled in when project is selected.

5) Participation at ENVELOPE meetings

- The PARTNER should ensure representation at the ENVELOPE meetings and audio/video monitoring / coaching audio conferences, as requested by the ENVELOPE consortium and as recorded in the corresponding meeting minutes and notes.
- If selected, the PARTNER representation at an ENVELOPE review meeting, if required by EC, is mandatory.

End of Annex 2

ENVELOPE HANDBOOK FOR APPLICANTS OPEN CALL #1



Deadline: 31 /07 / 2024

[ENVELOPE-PROJECT.EU](https://envelope-project.eu) | helpdesk@lists.envelope-project.eu

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SCOPE AND TERMS OF THE OPEN CALL

GENERAL OBJECTIVES

The project ENVELOPE, funded by the European Union's Horizon Europe program launches an Open Call for the involvement and engagement of "third parties" to run field trials on the developed experimental infrastructure.

ENVELOPE is inviting SMEs, Universities and Research Institutes to undertake a set of beyond 5G trials in domains compatible to the ENVELOPE ones.

The scope of ENVELOPE Open Call is to test the capabilities, functionality, and performance of the ENVELOPE Experimental Facility in domains that complement the domains of the internal Use Cases in order to assure its broad suitability and economic viability.

OC beneficiaries will have to either

- (i) Make use of at least 1 API or Enabler developed by the ENVELOPE Consortium in order to validate the platform's functionality; (or)**
- (ii) Design, develop, integrate and validate a new Enabler/API, extending this way the functionality of the ENVELOPE platform**

The case study where these APIs/Enablers will be applied can either be related to the automotive sector or a field other than CAM.

The Open Calls will maximize the impact and accelerate adoption of ENVELOPE demonstrating flexibility, user acceptance and technology transfer.

Through the Open Calls, ENVELOPE will ensure wide acceptance and achieve sustainability of its results through collaboration with industrial partners, and will foster the further take-up by inviting innovative use cases to tune up the ENVELOPE experimentation framework as well as the testbeds and large-scale trial facilities.

SPECIFIC OBJECTIVES OF THE CALL

ENVELOPE is giving the opportunity to the applicants of the Open Call to:

Submit proposals from **consortiums of collaborating and complementary partners** of up to 5 legal entities acting as technology and/or application suppliers for use case execution, with at least 50% of the consortium consisted by SMEs.

ENVELOPE needs to be open to rapid changes and elicitation of new requirements stemming from the new Use Cases.
The Open Call will have a clear European dimension.

The sub-projects selected during the Open Calls will be requested to provide feedback for required improvements and evaluate the infrastructure to meet 5G evolution service needs. All experiments should gain high levels of exposure and visibility.

Specifically, the purpose of the Open Call is to:

- i) **demonstrate** the reusability of the developed functionalities/interfaces by other stakeholders and potentially other verticals and/or
- ii) **extend** the provided infrastructure for experimentation as a service with additional functionalities tailored to the needs of other verticals.

GRANTS OFFERED BY THE OPEN CALL

ENVELOPE allocates €1,350,000 in the form of lump sum to provide financial support to the selected applicants of this first Open Call (Open Call 1, OC1)¹. Each of the subprojects will run for a period of 6 months and each member of the consortium will receive funding of up to €60.000. The total maximum budget of a consortium is €300,000.

A Helpdesk email service (helpdesk@lists.envelope-project.eu) is created to support the applicants.

¹ A second Open Call will be launched later in the lifetime of the project i.e., Open Call 2 (OC2).

ELIGIBILITY CRITERIA

The call for applications is accessible to legal entities located in eligible countries. These entities must be established in the Member States of the European Union and its Overseas Countries and Territories (OCT) or Horizon Europe associated countries, following the rules of Horizon Europe.

Applicants must maintain complete independence from project partners, their affiliated entities, and any controlled companies. Institutions, organizations, or other legal entities funded by or affiliated with a ENVELOPE partner are ineligible. The use of ENVELOPE Experimental facility is a compulsory requirement for all experimenters.

ENVELOPE reserves the right to reject a selected application if any of the aforementioned conditions are not met.

EXCLUSION

Grants will not be awarded in the event of:

- Bankruptcy, winding up, court-administered affairs, creditor arrangements, suspended business activities, or other comparable procedures (including procedures that involve persons who have unlimited liability for the applicant's debts)
- Noncompliance with social security or tax obligations (including if such noncompliance is committed by persons with unlimited liability for the applicant's debts)
- Commission of grave professional misconduct (including if such misconduct is committed by persons who possess powers of representation, decision-making, or control, beneficial owners, or those who are crucial for the award or implementation of the grant)



PROJECT OVERVIEW

ENVELOPE MOTIVATION AND APPROACH

ENVELOPE, contributes to Europe's technological leadership in communication technologies and in future emerging enabling

technologies, by strengthening European capacities in key parts of future services.

ENVELOPE proposes technological innovations towards vertical services in and around vehicles, including both safety-related and other services enabled or supported by 5G-Advanced and Beyond 5G, thus securing a leading position for Europe in the global ICT market over the coming 8-10 years.

5G has been built as a modular architecture to support any vertical running on top in a vertical-agnostic manner. However, it is realized that certain verticals (like CAM) have specific and strict requirements. The current network configuration and end-devices is a time-consuming manual process that requires tight coordination at technical and business levels across the verticals, the vendors, the network operator, and even the end-users. This hinders not only the greater adoption of 5GS but also the uptake of novel CAM UCs and the modernization of existing ones that require a tighter integration with the underlying network. ENVELOPE aims to advance and open up the reference 5G adv. architecture, and also to transform it into a vertical-oriented with the necessary interfaces tailored to the CAM UCs.

The main **objective** of ENVELOPE is to **advance and open up the reference 5G-Advanced architecture, and also to transform it into a vertical-oriented one** with the necessary interfaces tailored to the CAM vertical use cases that *i)* expose network capabilities to verticals, *ii)* provide vertical-information to the network; and *iii)* enable verticals to dynamically request and modify certain network aspects, in **an open, transparent and easy to use, semi-automated way**.

ENVELOPE TESTBEDS

ENVELOPE will utilize 3 different 5G test networks. A high-level overview is provided below.

More details are provided in the OC Text Document.

ITALY

In Italy, the emphasis is on exploring how a Beyond 5G network can support dynamic reconfigurations to satisfy the varying communication needs of applications. When a specific trigger arrives, the application can request the network to make specific communication resources available. Furthermore,

dynamic application deployment will also be investigated considering a multi-edge server environment.

THE NETHERLANDS

The Dutch site concentrates on developing and testing new Open APIs to efficiently handle uplink data traffic. This aims to facilitate data collection and the creation of a Digital Twin, operating on servers or at the edge. Leveraging the commercial SA network of KPN, the Dutch site hosts a DT service within a Multi-Access Edge service environment.

GREECE

The Greek site prioritizes vertical control and information delivery to the network/vehicle, along with exploring the interaction between the network of COSMOTE and the private 5GS of the partner NCSR, particularly in terms of roaming.

Please also check our website [here](#).

HOW TO APPLY

This section outlines the procedures for the submission of applications to the ENVELOPE Open Call.

Applications will be submitted electronically via the ENVELOPE's portal for electronic submission. (Accessible via the project's website: <https://envelope-project.eu/>) Hard copy submissions will NOT be possible.

Applications will be submitted using the forms provided inside the electronic submission system.

The structure and presentation will correspond to the instructions given in the forms. Applications will be discharged if they are not complete and don't contain all parts, mandatory Annexes and supporting documents.

Applications should be written in English, be readable and printable. The page number, and sections subject to limits, will be clearly shown in the application templates. The limit for a

full application is set to 30 pages (not counting legal and contact information).

After the call deadline, excess pages will not be taken into consideration by the evaluators. Incomplete proposals will not be evaluated.

The evaluation is limited to 50 eligible proposals; the priority is given by the time stamp of the completion and submission of the proposal.

APPLICATION FORM

The Application Form is available online and requires filling in information regarding the following aspects (Sections):

- Legal and contact information
- Project Summary (max 6 pages)
- Expected results (max 10 pages)
- Resource/Budget allocation (Max 1 page)
- Proposers Profile and Capabilities (max 2 pages)
- Requested Funding (max 2 pages per partner)
- Feasibility Check (max 2 pages)
- Use of proposal Information (max 1 page)
- Ethics Assessment (max 3 pages)

The applicant shall indicate the estimated allocation of resources (person-months) and costs, specifying a budgetary breakdown per direct cost item (staff, travel and subsistence). For travel costs the stipulations as per EC's decision⁷² of 12/01/2021 will apply. A 25% (calculated on direct costs) flat rate as overhead costs may be added. The total costs allocated for the application must be below the ceiling of 60.000 euros per beneficiary or 300.000 euros per subproject of maximum 5 beneficiaries. The cost reduction towards the ceiling will not be considered as a preferential criterion for the evaluation of the application.

All fields are mandatory to be filled in.

SUBMISSION OF APPLICATIONS

The online Application Form shall be completed any time after the launch of the Open Call (June 1st 2025) until 31 July 2025 (05:00:00 PM CET).

The form will be deactivated on 31 July 2025 at 05:00:00 PM CET. Any applications received after the specified deadline will be automatically rejected. It is highly advised that applicants submit their applications well in advance of the deadline to account for any potential technical or connectivity issues and ensure timely delivery.

Upon receipt of the application, ENVELOPE will send a confirmation receipt to the provided email address. This confirmation serves as acknowledgment that the email was received on time but does not certify that the application is complete and suitable for evaluation.

FURTHER INFORMATION FOR THE APPLICATIONS

Applicants are invited to visit the ENVELOPE Open Call page (<https://ENVELOPE-he.eu/open-calls/>) regularly in order to get the latest news.

In case of specific queries on the call, applicants may write an e-mail to helpdesk@lists.envelope-project.eu to receive help from the ENVELOPE Helpdesk team.

Contact:

All questions, requests for information and communication related to the Open Call must be directed to

helpdesk@lists.envelope-project.eu

OTHER HELPFUL MATERIAL

The applicants may refer to the ENVELOPE website to get more familiar with the project concept, approach and testbeds, as well as with the project outcomes so far, and to be informed about upcoming webinars. Downloadable material is/will be at the disposal of the applicants, while the most useful ones would be the project deliverables – as they are continuously published on the ENVELOPE website in the relative Section.

FROM APPLICATION TO EXPERIMENTATION QUICK OVERVIEW

Preliminary Feasibility check

The open call proposers are requested to contact the ENVELOPE consortium in order to verify the feasibility of the proposals to be implemented in the scope of the project and to receive initial feedback on the proposal planned activities. To perform the feasibility check, a description of the planned project must be submitted via the OC helpdesk support email. ([link](#))

Among else, the feasibility check should include: the short name of the proposal, a description of the envisioned project and the ENVELOPE facilities planned to be used in the experiment/implementation.

- **Deadline for Feasibility Check Document Submission: 15 June 2025 at 17:00 (CET)**
- **Deadline for providing feedback to Feasibility Check Document: 30 June 2025 at 17:00 (CET)**

Eligibility status

After closing the application phase (**31 July 2025**), all received applications will be first filtered according to their eligibility status, based on criteria described in the next Chapter. For all non-eligible applications, no further evaluation will take place. Extra information may be requested by the applicants e.g. to validate their legal entity status characterization.

With regards to the eligibility rules for participation and funding in the Open Calls, the General Annexes to Horizon Europe for the Work Programme 2023–2024 apply.

Implementing the Decision (EU) 2022/2506 on measures for the protection of the Union budget against breaches of the principles of the rule of law in Hungary, that took effect on 16 December 2022, the Hungarian entities are not eligible for funding.

Proposers' organizations can submit multiple proposals; however, only one proposal per organization might be selected for funding in this Open Call.

Beneficiaries of the ENVELOPE project are not eligible to participate in this open call.

In/Out Scope Screening

Eligible applications will further undergo a scope screening check: This process will ensure that the proposed type of experiment is:

- a) in context with the ENVELOPE project and call scope
- b) the project must have a European dimension. (e.g., involve multiple countries, consider potential economic impact, socio-economic benefits)

Limitation of evaluated proposals

In case the number of applications passing the feasibility check is higher than 50, the proposal latest submitted proposals will be discharged, and the first 50 eligible will be evaluated.

The Evaluation Process will take up to 60 working days from the closure of the submission phase; at the end of this the selected applicants will be informed via email.

Contracting Time

Once a proposal is selected, the proposer's organization will be contracted by the project as a third party receiving financial support. This will require the signature of the agreement which can be found as download on the ENVELOPE website together with this call information.

The successful applicants will be informed by the contracting party and they will be put in contact with the suitable testbed.

Granted applicants will be asked to sign an appropriate Non Disclosure Agreement.

The selected applications will start the contracting phase, which should end within the kick-off of the Payments procedure and milestones definition phase (planned date: within December 2025).

Before awarding any grants to a third party, it will be checked whether the third party is a legal entity with a history of at least three years of commercial operations and has not been declared insolvent.

Any third party funding agreement will contain a clause ensuring that the European Commission and the Court of Auditors can exercise their powers of control, concerning documents premises and information, including those stored on electronic media.

Reporting

The experimentation cycle ends with the creation of a report describing the activities and the results that have been achieved during the validation phase.

In case the produced outputs of the experiments lead to scientific publications or if they are presented in presentations or webpages, they should include an acknowledgement to ENVELOPE, the SNS program and the European Commission with the respective logos.

FROM APPLICATION TO EXPERIMENTATION PROCESS IN DETAIL

GENERAL SPECIFICATIONS

Activities that qualify for financial support

The activities that qualify for Financial Support to Third Parties (FSTP) are intended to highlight the advanced and creative capabilities of the ENVELOPE platform and enhance the platform's influence in domains and use cases beyond those already covered by the internal use cases. The objective is to maximize the applicability and use of the ENVELOPE experimental facility for CAM vertical applications. The use of ENVELOPE Experimental facility is a compulsory requirement for all experimenters

Persons or entities which may receive financial support

The applicants must be a CONSORTIUM of no more than five entities from EU member states or countries engaged with Horizon Europe. Entities from third countries that are not affiliated with Horizon Europe are ineligible for funding. The expected consortium composition would be SMEs, Universities or research Institutes. Entities must be located in one of the EU Member States, its Overseas Countries and Territories (OCT), or a Horizon Europe Associated Country. Consortia having at least one member from one of the SEE (South-East Europe) nations will be favored, as one of the purposes of the ENVELOPE Project is to support European countries under-represented in European funding programmes. ENVELOPE partners CANNOT be involved in the grantees' initiatives, nor can their affiliates or employees –

including those working under an employment contract, contract, or contract identical to an employment contract – or board members.

EVALUATION PROCESS

All submitted proposals will be evaluated using criteria similar to Horizon Europe. Evaluations will be organized in three steps.

The flowchart of the selection process is presented below.

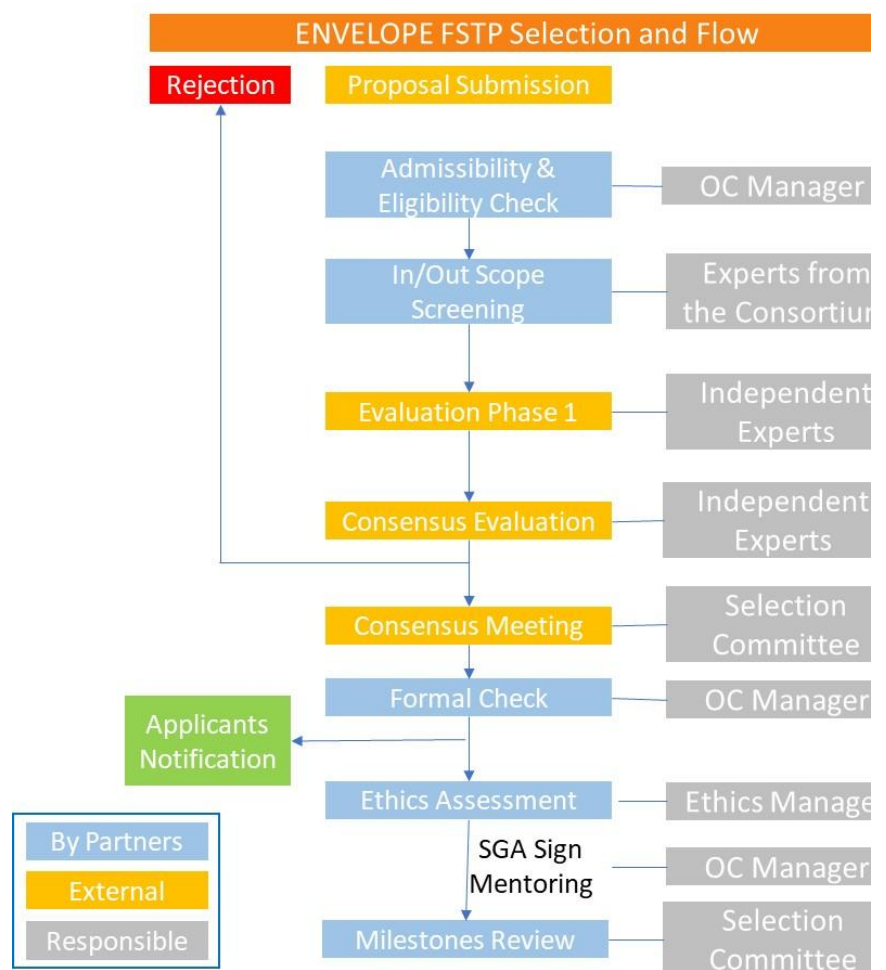


Figure 1 ENVELOPE Selection Process

To properly organize the FSTP Process, a "Selection Committee" has been created composed by an expert appointed by the Project Coordinator, the Technical Manager, the Open Calls Manager, and the Innovation Manager. The Selection Committee is coordinated by the Open Calls Manager and the composition can be extended during the Consensus meeting by bringing two (2) independent External

Experts who took part in the Independent Evaluation, as well as the internal Ethics Manager and an Expert.

ELIGIBILITY ASSESSMENT

The assessment criteria for the evaluation of the applicants eligibility are presented below:

- **Submission system.** Proposals must be submitted through the online management system for the ENVELOPE Open Call. Other proposal submission methods will not be accepted.
- **Deadline.** Proposals must be submitted prior to the deadline of the call. Applications must be submitted by the call's closing time and date. As the submission time of the proposal, the time recorded by the Open Call management webpage shall be the official one. Late submissions will not be accepted.
- **English-language.** The established language for open calls is English. All required sections of the proposal must be in English for it to be accepted.

Additionally, proposals received will be checked against the Eligibility Check Criteria"

- **Type of Activity** *The use of ENVELOPE Experimental facility is a compulsory requirement for all experimenters.*
- **Type of Third Party** as described above.
- **Established in an EU Member State and its Overseas Countries and Territories or Associated Country**

At this point, qualifying requirements are compared to the **Declaration of Honor** or self-declarations provided in the application form. Later, throughout the evaluation process, the aforementioned criteria will be evaluated, and if a candidate does not meet any of them, it will be disqualified.

IN/OUT SCOPE ASSESSMENT

Initially, all eligible proposals will have their executive summaries and basic targets evaluated based on the proposal's:

- **Scope.** The proposal's objectives have to be within the project's scope as outlined in the present document. The experimenters must incorporate the ENVELOPE Experimental facility into key operations that illustrate the facility's advanced and creative capabilities in the relevant domain.
- **European Dimension.** The project must have a European dimension (e.g., involve multiple countries, consider potential economic impact, socio-economic benefits). Each proposal will be examined by a member of the Selection Committee and once reviewed, the Selection Committee will forward the list of proposals to receive Financial Support to the General Assembly for approval.

EXTERNAL ASSESSMENT

Each proposal will then be assigned to two external expert evaluators outside of the ENVELOPE consortium. The external experts will be independent from the applicants and not employees of Consortium partners, permanent collaborators, or members of the board.

The **Evaluation criteria** are as follows:

1. EXCELLENCE which will evaluate:

- **Ambition.** The candidates must demonstrate the extent to which their planned project contributes to the project's scope, has a **European dimension**, and **advances the state of the art**. The sub-project must describe its novel **objectives**. (e.g novel concepts and approaches, new products, services or business). Applicants must explain how the application of the ENVELOPE Experimental facility can improve internal processes in the use cases in areas such as enhancing data processing autonomy, portability, scalability, energy efficiency, and security, among others.
- **Innovation:** Similarly, applications are expected to furnish details regarding the extent of novelty present in their field and the extent to which their proposed project differs from existing ones.
- **Soundness of the approach** and credibility of the proposed methodology.

2. IMPACT will analyse:

- **Market opportunity:** Applicants are required to exhibit a well-defined understanding of their proposed course of action and the potential marketability of their new or

improved product or process. For instance, how it could effectively address a specific problem in a particular field. Additionally, they must *showcase the business potential of the ENVELOPE Experimental facility in their respective domains*.

- **Commercial Strategy and Added Value:** Applicants are required to showcase the value added by their new or improved product or process, which could involve commercializing it to address a systematic issue in a particular industry or procedure rather than a specific problem. Moreover, *experimenters must exhibit the extra performance, power, portability, or scalability – at least in two dimensions – provided by their experiments in the particular domain*.
- **Environmental and social impact:** Applicants must exhibit how their project can contribute to sustainable development goals, and other European policies by demonstrating its impact on the environment, society and the economy.

3. IMPLEMENTATION will consider:

- **Team:** Applicants are required to demonstrate their skills in management and leadership, including their ability to develop an idea from conceptualization to market, their capacity to execute their plans, and their understanding of the market they intend to enter. The team should consist of individuals with diverse backgrounds and skillsets, and its gender balance should be taken into consideration.
- **Resources.** Provide evidence of the quality and efficacy of the allocated resources in achieving the proposed objectives and deliverables.

Evaluation Rating System

The External Expert evaluators will rate each application based on each criterion using a scale of 0 to 5. The minimum threshold for each criterion in each section is set at 3. The final score will be determined by averaging the individual evaluations provided by the Evaluators. The overall threshold, which applies to the sum of the three individual scores, is 10. Proposals that score less than 10 will be rejected

A consortium that includes **a member from the SEE region** among its applicants will receive an additional point added to its overall score (derived from the sum of the three individual criteria).

In the event of a tie, the following criteria will be utilized to resolve the situation. The criteria in order of priority are:

- 1) The number of consortium partners from a SEE country.
- 2) The highest score attained in the Excellence Section.
- 3) The gender balance among the personnel responsible for carrying out the project activities.

The Selection Committee will determine other factors pertinent to the call's objectives.

After individual evaluation, the experts will have a consensus telco to agree on a common evaluation text and a score.

CONSENSUS GROUP EVALUATION

Once the Independent Individual Evaluation has been completed, the external experts responsible for assessing the proposals will convene in a Consensus Group with the **Selection Committee** and the internal Ethics Manager to establish the Finalists and the Reserve List. The Consensus Group complementary to the Ext. Evaluators assessment, will specifically examine instances where there is a marked disparity between the evaluators' scores. The proposals with the highest ranking will be chosen for funding; however, the Selection Committee reserves the right to reject a highly ranked proposal on valid grounds of significant ethical concerns, or a conflict of interest, should the identification of such concerns be not possible in earlier phases e.g., feasibility check . In such cases, the next-ranked proposal will be selected instead. The precise number of proposals approved for funding will be determined based on the overall quality of the proposals. If no consensus is reached among the evaluators, an additional evaluator will be included to provide an additional evaluation. The final List of Finalists will be reviewed and approved by the OC Manager.

ETHICS REQUIREMENTS

The requirements in relation to Conflicts of Interest and Ethics and Values are highlighted in the ENVELOPE Open calls Sub-grant agreement. In essence, the open call projects are obliged to adhere with the relevant articles in the Horizon Europe Model Grant Agreement (HE-MGA), whose latest annotated full version can be found [here](#) for further reference.

In relation to Conflict of Interest, the most relevant Article in HE-MGA that Open call participants are obliged to follow is ARTICLE 12 – CONFLICT OF INTERESTS, including:

Conflict of interests. The beneficiaries must take all measures to prevent any situation where the impartial and objective implementation of the Agreement could be compromised for reasons involving family, emotional life, political or national affinity, economic interest or any other direct or indirect interest ('conflict of interests'). They must formally notify the granting authority without delay of any situation constituting or likely to lead to a conflict of interests and immediately take all the necessary steps to rectify this situation. The granting authority may verify that the measures taken are appropriate and may require additional measures to be taken by a specified deadline.

Consequences of non-compliance. If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 28 in HE-MGA) and the grant or the beneficiary may be terminated (see Article 32 in HE-MGA). Such breaches may also lead to other measures described in Chapter 5 in HE-MGA.

In relation to Ethics and Values, the most relevant Article in HE-MGA that Open call participants are obliged to follow is Article 14 – ETHICS AND VALUES, including:

Ethics. The action must be carried out in line with the highest ethical standards and the applicable EU, international and national law on ethical principles. Specific ethics rules (if any) are set out in Annex 5 in HE-MGA.

Values. The beneficiaries must commit to and ensure the respect of basic EU values (such as respect for human dignity, freedom, democracy, equality, the rule of law and human rights, including the rights of minorities). Specific rules on values (if any) are set out in Annex 5 in HE-MGA.

Consequences of non-compliance. If a beneficiary breach any of its obligations under this Article, the grant may be reduced (see Article 28 in HE-MGA). Such breaches may also lead to other measures described in Chapter 5 in HE-MGA.

If applicable, the beneficiary is responsible for obtaining all necessary ethical and regulatory approvals from the relevant committee(s) before engaging in any project activities that require such approvals. Additionally, if involving human subjects or their legal guardians in the project, the beneficiary must obtain properly signed informed consent and acknowledgement forms.

SUBGRANT AGREEMENT (SGA)

Each third-party sub-project will sign the SubGrant Agreement under a 'lump sum model'. This will imply that financial support will be provided to the third parties upon delivery of the expected outputs. In the case of consortia as beneficiaries, the SGA will be signed only with the consortium leader.

The SGA will include, as an annex, the 'Individual Mentoring Plan' for each project. This document establishes, among others, the KPIs and Deliverables that will be taken into account when evaluating the grantees' performance at the milestones review, as well as the budget for the project. To guarantee that the lump sum is aligned with the Beneficiary's underlying actual costs, each 'Individual Mentoring Plan' will include an outline of the dedication of resources and a detailed cost estimate.

PAYMENT'S SCHEDULE

The payment is scheduled in three parts, subject to the level of development of the action, the submission of deliverables and the accomplishment of KPIs as reflected in the description of the trial:

- 15% (Up to €45.000) of the assigned Grant at the end of the 1st month from the Grant signature.
- 70% at competition of the contracted activities
- 15% when the EC will accept the projects final results and not after M36

MILESTONE REVIEWS

At the outset of the support program, the third-party sub-projects that are selected will work with their allocated mentors to establish an "Individual Mentoring Plan." At each Milestone Review (which occurs when a payment is due), the Selection Committee led by the Technical Manager will assess the performance of the grantees according to the following criteria:

- **Deliverables' quality.** The Technical Manager will evaluate and score the deliverables outlined in the "Individual Mentoring Plan".

- **Technical performance indicators.** The Technical Manager will evaluate and score the Key Performance Indicators (KPIs) outlined in the "Individual Mentoring Plan".
- **Deadline Compliance.** The Technical Manager will be responsible for scoring.

The final score will be determined by assigning a score from 0 to 10 for each criterion, and the weight of each criterion in the final score will be as follows:

- Deliverable quality (30%).
- Technical performance indicators (60%).
- Deadline Compliance (10%).

According with this final score:

- **Beneficiaries who score above the threshold of 7 points** will be eligible to receive the next payment and will be considered as potential candidates to continue in the program.
- **Beneficiaries who fail to meet the threshold criteria** will be recommended by the mentors to exit the program. The Selection Committee will evaluate and confirm this decision, after which the beneficiaries will be required to leave the program and forfeit any further payments.

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ATTENDANCE AT MEETINGS

Attendance at the meetings listed below is required. It is therefore recommended to budget these in the proposal.

- General meeting with the project's representatives within one month from contracting date.
- At least 2 technical meeting to be held by the chosen testbed: TBD case by case
- Trials results will undergo a formal review by the project. The formal review is required for obtaining full payment of the selected applicants.

ACCEPTABLE COSTS

As the experimenter will be linked to the ENVELOPE consortium as 3rd Party receiving financial support, specific arrangements are given by the EC with respect to financial costs and payment schemes.

As a 3rd Party, the proposing party needs to include an overview of the estimated costs in its proposal at the time of submission. Costs consist of personnel costs, direct costs (such as travel, consumables, etc.) and indirect costs.

The project contribution to the third parties will be 100% of the declared costs, in accordance with the corresponding rules for participation in the SNS JU programme.

The costs incurred by a third party must adhere to the regulations and principles outlined in the Horizon Europe program and must be properly documented in the third party's financial records. This means that the rules pertaining to cost eligibility, identification of direct and indirect costs, upper funding limits, as well as controls and audits, must be followed.

The costs of a 3rd Party have to comply with the rules and the principles mentioned in the Horizon Europe AGA — Annotated Model Grant Agreement (see https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/aga_en.pdf), in the same way as the beneficiaries, and must be recorded in the accounts of the 3rd Party. In other words, the rules relating to eligibility of costs, identification of direct and indirect costs and upper

funding limits apply. Equally those concerning controls and audits of the European Commission.

AUDITS AND SURVEYS

The selected Third Parties should ensure in written that, as recipient of EU financial support, allow the Commission, the European Anti-fraud Office (OLAF) and the Court of Auditors to exercise their powers of control on documents, information, even stored on electronic media, or on the final recipient's premises.

Beneficiaries are also expected to participate in impact assessment, user acceptance and evaluation surveys of the ENVELOPE platform by filling in template survey forms provided by the ENVELOPE project.

GENDER BALANCE

The Grantees are expected to ensure equal opportunities between men and women throughout the implementation of the action, and they should take all reasonable steps to achieve a gender balance at all levels of personnel assigned to the action, including managerial and supervisory positions, wherever feasible.

INTELLECTUAL PROPERTY RIGHTS

Regarding intellectual property rights (IPR), we outline the principles that will govern the management of IPR within the third-party project. The grant awarded to the chosen applicants will not impact the ownership of any pre-existing intellectual property, including background technologies, designs, works, inventions, software, data, techniques, know-how, or materials. The third-party that contributes with ENVELOPE will retain ownership of the intellectual property.



ENVELOPE: Evaluation and Validation of Connected Mobility in real Open Systems beyond 5GS

OPEN CALL #1

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The ENVELOPE Consortium is the following:

Participant Number	Participant organization name	Short name	Country of Origin
1	EREVNITIKO PANEPISTIMIAKO INSTITOUTO SYSTIMATON EPIKOINONION KAI YPOLOGISTON	ICCS	Greece
2	HEWLETT PACKARD ITALIANA SRL	HPE	Italy
3	TELECOM ITALIA SPA	TIM	Italy
4	FONDAZIONE LINKS - LEADING INNOVATION & KNOWLEDGE FOR SOCIETY	LINKS	Italy
5	NEXTWORKS	NXW	Italy
6	TEORESI S.P.A	TEO	Italy
7	COMUNE DI TORINO	COTO	Italy
8	ORGANISMOS TILEPIKOINONION TIS ELLADOS OTE AE	OTE	Greece
9	NATIONAL CENTER FOR SCIENTIFIC RESEARCH "DEMOKRITOS"	NCSRD	Greece
10	FOGUS INNOVATIONS & SERVICES P.C.	FOGUS	Greece
11	ISFM INTELLIGENT SYSTEMS FOR MOBILITY	ISFM	France
12	NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK TNO	TNO	Netherlands
13	KONINKLIJKE KPN NV	KPN	Netherlands
14	SIEMENS INDUSTRY SOFTWARE NETHERLANDS BV	SISW	Netherlands
15	COMMSIGNIA Korlatolt Felelossegu Tarsasag	CMS	Hungary
16	LENOVO DEUTSCHLAND GMBH	LNVO	Germany
17	UNIVERSITAET DUISBURG-ESSEN	UDE	Denmark
18	ATHINA-EREVNITIKO KENTRO KAINOTOMIAS STIS TECHNOLOGIES TIS PLIROFORIAS, TON EPIKOINONION KAI TIS GNOSIS	ISI/ATH	Greece
19	IQUADRAT INFORMATICA SL	IQU	Spain
20	FUNDACION CENTRO DE TECNOLOGIAS DE INTERACCION VISUAL Y COMUNICACIONES VICOMTECH	VICOM	Spain
21	EUROPEAN ROAD TRANSPORT TELEMATICS	ERT	Belgium

	IMPLEMENTATION COORDINATION ORGANISATION - INTELLIGENT TRANSPORT SYSTEMS & SERVICES EUROPE		
22	EBOS TECHNOLOGIES LIMITED	EBOS	Cyprus
23	INCITES CONSULTING SA	INC	Luxemburg

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Funding Scheme: HORIZON JU Research and Innovation Actions • Topic: HORIZON-JU-SNS-2023-STREAM-D-01-01 • Start date of project: 01 January 2024 • Duration: 36 months

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1. Introduction

The project ENVELOPE, funded by the European Union's Horizon Europe program, aims to advance and open up the reference 5G advanced architecture, and also to transform it into a vertical-oriented with the necessary interfaces tailored to the CAM UCs that:

- i) expose network capabilities to verticals,
- ii) provide vertical-information to the network;
- iii) enable verticals to dynamically request and modify certain network aspects in an open, transparent and easy to use, semi-automated way.

ENVELOPE aims to deliver 3 large-scale B5G trial sites in Italy (operated by LINKS foundation), Netherlands (operated by KPN and TNO) and Greece (operated by OTE and NCSR) for CAM services and beyond, implementing functionalities tailored to CAM services, along with advanced exposure capabilities.

Although focused on the CAM vertical, the resulting developments are reusable by any vertical. The ENVELOPE architecture serves as an envelope that can cover, accommodate and support any type of vertical services. The applicability of ENVELOPE capabilities will be demonstrated via the project CAM UCs and via projects selected in two rounds of open calls. Through these Open Calls, ENVELOPE will ensure wide acceptance and achieve sustainability of its results through collaboration with industrial partners, and will foster further take-up by inviting innovative use cases to tune up the ENVELOPE experimentation framework as well as the testbeds and large-scale trial facilities.

As a result, ENVELOPE launches this first Open Call i.e., Open Call 1 (OC1), for the involvement and engagement of “third parties” to run field trials on the developed experimental infrastructure. ENVELOPE is inviting SMEs, research institutes and universities to undertake a set of beyond 5G trials by developing vertical services compatible to the ENVELOPE platform, either expanding its field of application to other industries or confirming its functionality in automotive/CAM UCs other than those already tested within the consortium.

Specifically, the purpose of the Open Call is to

- i) demonstrate the reusability of the developed functionalities/interfaces by other stakeholders and potentially other verticals and/or,
- ii) to extend the provided infrastructure for experimentation as a service with additional functionalities tailored to the needs of other verticals.

The Open Calls will maximize the impact and accelerate adoption of ENVELOPE demonstrating flexibility, user acceptance and technology transfer.

A total of **€ 2.700.000**, for both ENVELOPE Open Calls, will be provided in the form of lump sum funding of up to **€300.000** per consortium of beneficiaries, with max **€60.000** per beneficiary. From the total amount, €1,350,000 will be allocated to at least 5 projects selected for OC1, and the remainder amount (€1,350,000) will be allocated to projects in a second Open Call (OC2) that will be launched later in the lifetime of the ENVELOPE project.

1.1 Background information on the ENVELOPE project

Over the past decade, the European Commission (EC) has invested significantly in creating open 5G platforms for experimentation leading to various alternative implementations, with Open5GS and OpenAirInterface (OAI) being the most prominent ones.

However existing open-source implementations haven't fully kept up with the latest 3GPP standards while basic features of Release 15 were never implemented. As a result, these open-source systems are limited in functionality and can only serve basic proof-of-concept (PoC) purposes.

Another issue is that these open-source implementations lack support for verticals and their unique requirements. For example, they don't handle multiple user planes (PDU sessions), network slices, or quality of service (QoS) differentiation well. Additionally, non-commercial implementations struggle with the 5G Policy and Charging Control (PCC) framework, relying heavily on static configurations.

ENVELOPE will be leveraging the experience and developments of the experimentation platforms of 2 SNS StreamC projects and the know-how gained in deploying large scale trials and managing open call projects of previous SNS Stream D projects. ENVELOPE aims to address these gaps by implementing several currently missing functionalities, as well as enabling vertical services to leverage on these functionalities through simplified APIs.

Vision of Experimentation as a Service

The ENVELOPE project offers an **Experimentation as a Service** (EaaS) module to guarantee a flexible and **user-friendly** environment for testing Connected and Automated Mobility (CAM) applications and other vertical services, leveraging the enhanced capabilities introduced in Beyond 5G networks and made available by the ENVELOPE Platform.

The EaaS module enables experimenters to configure, launch, and monitor experiments through the **ENVELOPE Portal** which is the dedicated interface for interaction. This key component provides a Graphical User Interface (GUI) for accessing the various functionalities related to application onboarding, experiment lifecycle management, and real-time monitoring. These functionalities ensure a smooth management of the experiments without requiring the experimenter to have an in-depth knowledge of the **Beyond 5G networks**.

ENVELOPE Platform Architecture

The **ENVELOPE Platform** enables the experimenters to achieve a seamless experimentation and testing of applications from CAM and other verticals over a Beyond 5G (B5G) system. The Platform aims to facilitate the management of experiments, allocation of resources, and deployment of applications at the different network and infrastructure layers.

The key components of the ENVELOPE Platform architecture are the **ENVELOPE Enablers** that offer experimenters a set of easy-to-use APIs for simplifying the interaction between applications and B5G networks interfaces. The ENVELOPE Enablers are software components that implement as an intermediate **translation** layer that converts the complex B5G system's interfaces into easy-to-consume interfaces. They represent the main objective of the ENVELOPE Platform to make more accessible the complex interfaces of B5G system.

The ENVELOPE Enablers leverage the already available Network APIs which include the Northbound APIs of the 5G core and/or edge-level APIs. In the specific, the ENVELOPE Enablers can access:

- *Far-Edge APIs*: related to Radio Access Network (RAN) and User Equipment (UE) resources, such as Onboard Units on vehicles
- *Edge APIs*: they provide access to User Plane Functions (UPFs) at the edge level
- *B5G Network APIs*: they allow interactions with the B5G core.

Dynamic slicing, predictive QoS, and Access Traffic Steering-Switching-Splitting (ATSSS) Multi-connectivity are some of the features that can be accessed through the ENVELOPE APIs. Details about the available ENVELOPE Enablers and related ENVELOPE APIs are introduced in the following section.

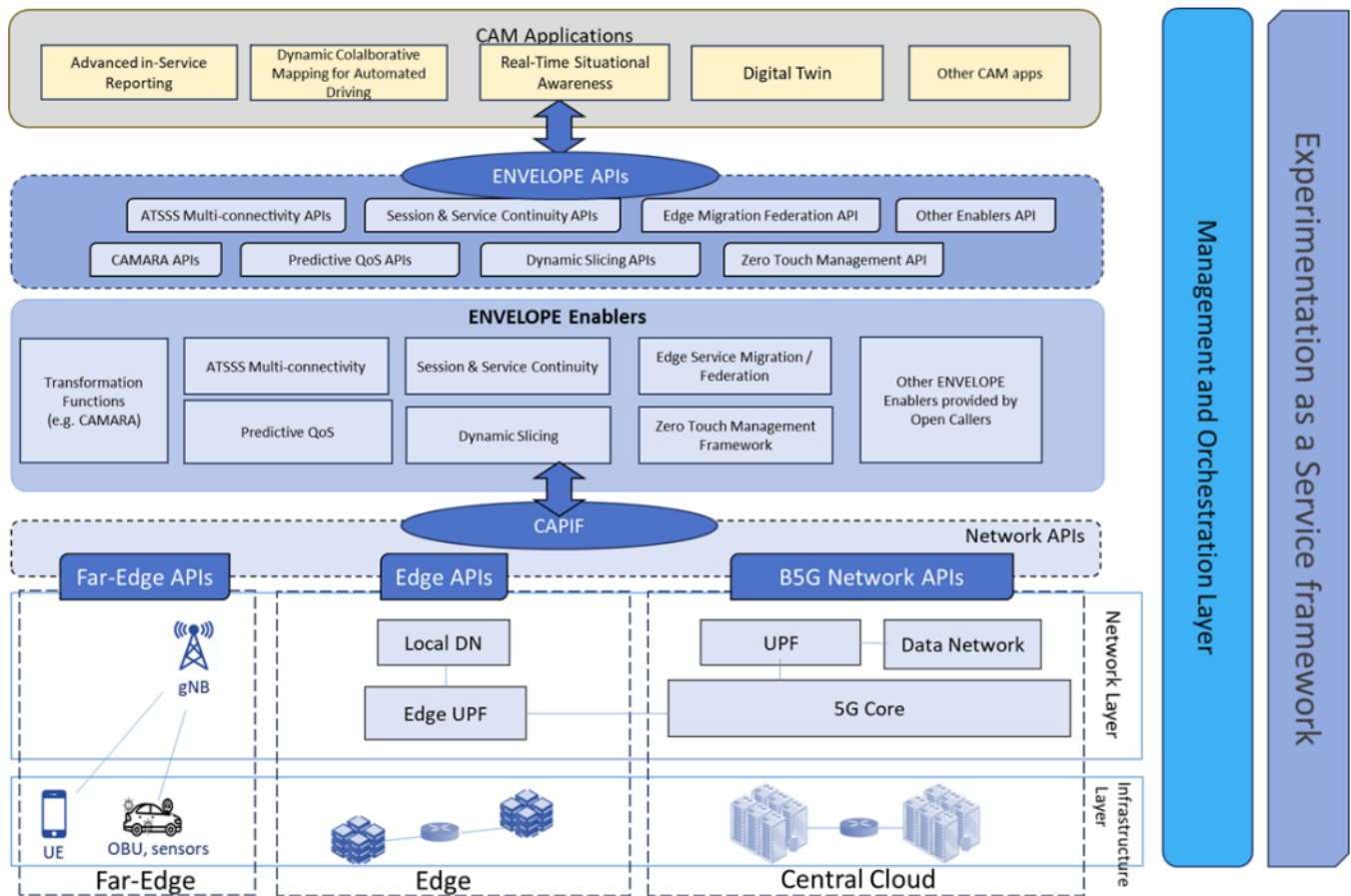


Figure 1: Envelope High Level Platform Architecture

For more information consult public **Deliverable D2.2 - ENVELOPE platform architecture requirements and specifications**

1.2 ENVELOPE Enablers in Detail

In the following paragraphs, we introduce the various ENVELOPE Enablers, describing the corresponding functionality, as well as details of their implementation status and readiness in the 1st ENVELOPE Open Call.

Enablers for Management and Orchestration

- **Description**

- **Management and Orchestration Layer:** it provides efficient and dynamic service delivery. The layer integrates multiple components to provide a comprehensive framework for managing and orchestrating computing and network resources, as well as the services running on top of virtualized infrastructures, enabling automated deployment, scaling and optimization of applications. The ENVELOPE Management and Orchestration Layer is the modular system to ensure that the network and the computing infrastructures can meet the application requirements when a user instantiates an application to run an experiment through the ENVELOPE Experimentation as a Service Module.
- **Native AI zero touch management:** it is responsible for controlling CAM application related parameters with an AI-driven closed-loop (CL). It is realized through the Intent Engine and the Intent Handlers. The Intent Engine module enables users to express service requests in high-level intent representations following the TMF 921 standard. It streamlines network operations and translates user intent into actionable tasks. The actions based on the Intents are handled by the respective Intent Handler.

- **Readiness**

The Intent Engine has been implemented as a stand-alone module. The next step is to integrate it with the Management and Orchestration Layer used in the project to control specific CAM application parameters (such as anomaly detection sensitivity) dynamically via a CL function. The Intent Handler is specific to the application. It is

not possible to reuse the same implementation for different applications. An **ad-hoc implementation** for a given application is needed.

Enablers for Edge Computing

- **Description**

In the ENVELOPE project, a unified cloud-native edge architecture is defined that encompasses a set of enabling edge features: service/host discovery, traffic influence, edge service orchestration, service migration (handover), and edge federation. Our approach leverages a containerized architecture design, deploying services in containers (e.g., Docker) across various edge hosts.

Application Functions (AFs) perform transformation functions between the ENVELOPE APIs and edge APIs for underlying B5G and edge functions. This architectural design abstracts specific implementation choices concerning underlying standardization specifications (e.g., ETSI MEC, 3GPP EDGEAPP). One example of ENVELOPE APIs offered in the project is the CAMARA Edge Cloud APIs, which support edge discovery, application management (edge orchestration), and traffic influence. More details on the exposed APIs are available in Section 1.3.

The AF layer interacts with the B5G core to trigger UE traffic re-routing from the central UPF to the edge UPF residing in the selected edge host. This can be achieved via a new UE route selection policy (URSP) sent to the UE, specifying DNNs, slices, and routes for a particular application running at the UE .

- **Readiness**

In the Dutch site, a Kubernetes-based edge architecture specification has been finalized, and an initial deployment in a lab environment with two Kubernetes clusters has been completed. For the Open Call #1, this edge infrastructure deployment will be replicated to the Dutch site premises near Eindhoven, with one cluster deployed at the edge in the KPN cloud environment and another in the central cloud (e.g., Amazon AWS). These two clusters will be connected using *liqo*, a tool for seamless multi-cluster connectivity. Third-party users will be able to specify which cluster (edge or cloud) to instantiate their application when defining their experiments (at this stage via the EaaS platform only).

In the Italian site, the edge architecture specification has been finalized. For the Open Call #1, the first release will include support for Application Package Management, allowing the on-boarding of application packages, and Application Instance Management, enabling the instantiation and termination of services. Both enablers will partially comply with ETSI MEC 10-2 standard specifications. The CAMARA Edge Application Management APIs will be offered to application providers for on-boarding, instantiation, and termination of services. The ENVELOPE approach is constrained to a containerized architecture, wherein services are deployed in containers (e.g., Docker) across various edge hosts. Consequently, the instantiation and migration of virtual machines (VMs) are not supported.

Enablers for ATSSS-compliant multi-connectivity

- **Description**

The *Access Traffic Steering, Switching, and Splitting* (ATSSS)-like multi-connectivity feature aims to enhance network reliability, optimize resource utilization, and support diverse application requirements. This feature allows simultaneous use of multiple access networks (such as 5G and Wi-Fi) to dynamically manage traffic based on network conditions. This enables dynamic traffic management, where data can be steered, switched, or split across different networks based on real-time conditions.

A key innovation is **selective traffic duplication**, which ensures that only critical data packets are duplicated, improving reliability without overloading network resources. Selective traffic duplication will be AI-driven, using reinforcement learning to optimize traffic duplication. ENVELOPE provides dedicated APIs that allow vertical services to configure and manage multi-connectivity features, ensuring seamless and efficient network usage.

The multi-connectivity feature will incorporate Multipath TCP (MPTCP) and/or Multipath QUIC (MPQUIC) to optimize data distribution, ensuring low-latency and high-reliability communication, especially for Connected Automated Mobility (CAM) applications.

To bypass limitations in current 5G core implementations (like Open5GS and Free5GC), ENVELOPE adopts an over-the-top approach for multi-connectivity, which is inspired by ATSSS but does not require extended support in several 5G network functions. This approach is based on an ATSSS proxy deployed outside UPF.

- **Readiness**

A multi-connectivity testbed that integrates the Free5GC core network (CN) with an Amarisoft radio access network (RAN) has been established in Greece. On the user equipment (UE) side, various onboard units (OBUs) based on ARM and x86 architectures, running Linux distributions (e.g., Ubuntu 24.04) have been evaluated. Each

OBU is equipped with a Quectel RM520N interface to facilitate 5G connectivity, and leverages the Free5GC software stack—specifically, the N3IWF-UE—for non-3GPP access. This configuration allows the OBUs to register with the 5G CN via both 5G and WiFi networks and access the Internet and other local edge services (such as video streaming) through either or both interfaces.

At the transport layer, the testbed supports both the MP-TCP protocol (available in all modern Linux kernels) and the MP-QUIC protocol developed in the ENVELOPE project based on the open source pico-[quic](#)¹ implementation. Additionally, we have implemented a proxy-to-proxy communication mechanism to maintain a unified session across multiple paths. On the UE side, a client-side proxy receives and transmits traffic from both paths, efficiently managing both downlink and uplink data. Similarly, within the core network, a server-side proxy—collocated with the UPF— consolidates both paths into a single session and establishes connectivity with the edge service.

The current version of MPQUIC includes the following features: (i) per-path congestion control to manage network performance efficiently, (ii) application-level flow control for optimized data management, (iii) real-time flow scheduling to enhance multi-path transmission. The implementation extends pico-[quic](#) but implements a subset of the draft-ietf-quic-multipath specification. While it provides core multipath functionality, some ATSSS-planned rules are still under development and will be integrated in an upcoming release. Additionally, traffic rule selection will be enhanced using reinforcement learning (RL) agents located at both the data network and the UE, which will also be incorporated in the next update. The first Open Call will focus on enabling MPQUIC to make packet transmission decisions based on minRTT scheduling instead of ATSSS.

Enablers for Predictive QoS

- **Description**

Predictive QoS (PQoS) has long been considered as a promising approach in enabling the graceful adaptation of vertical services/application to the anticipated conditions in the network. Applying analysis on historical and contextual data that describe network performance and conditions, PQoS enables the proactive identification of significant fluctuations and the generation of corresponding notifications (i.e., In-advance Quality of Service Notifications, IQNs) towards the vertical service/application, allowing the later to adjust its operation within the anticipated environment¹⁴. In total, the ENVELOPE platform aims to provide applications/services with access to three types of PQoS Inference (PQoS-I) services, namely:

- **QoS Sustainability PQoS (QS-PQoS) service.** The targeted functionality fits the scope of the QoS Sustainability type of analytics specified in 3GPP TS 23.288 Clause 6.9.
- **DN Performance PQoS (DNP-PQoS) service.** The targeted functionality fits the scope of the DN Performance type of analytics specified in 3GPP TS 23.288 Clause 6.14.
- **Hybrid PQoS (H-PQoS) service.** Here predictions consider both input data from the network (QS-PQoS input data) and service level input data (DNP-PQoS input data).

Additionally, ENVELOPE will offer a PQoS Training (PQoS-T) service that will provide vertical applications with the ability to train their individual ML models, tailored for the support of individualized DNP/H-PQoS services

- **Readiness**

The project has focused first on the support of the predictive analytics service with respect to the acquisition of the runtime inference data and the establishment of the necessary interfaces for the subscription of vertical services to the corresponding PQoS-I services. As such, the first Open Call will focus on the support of the PQoS-I services. The PQoS-T service will be supported in the second Open Call. Given this focus on PQoS-I services in Open Call 1, the ENVELOPE platform will provide support for already trained predictive analytics models. In the case of QS-PQoS the model will be provided by the ENVELOPE platform, trained based on project internal measurement campaigns. The project will provide support for the collection of application-level monitoring data required for the DNP-PQoS and H-PQoS services e.g., Prometheus interfaces, data base, etc. However, the creation and the training of a prediction model are activities to be supported by the applicants.

Roaming

The project targets at the support of seamless mobility in inter-PLMN environments, through two alternative roaming schemes, both targeting a Local BreakOut (LBO) operation i.e., once connected to the visited PLMN (vPLMN), UE user-plane traffic is directed to a local User Plane Function (UPF), without traversing the home PLMN (hPLMN).

HPE-Open5GS solution

¹ <https://github.com/private-octopus/picoquic>

- **Description**

In this solution the hPLMN is served by the HPE Aruba Networking Private 5G Core Network (HPE ANP 5GC), physically located within the OTE infrastructure in the Greek trial site². The visited networks served by an Open5GS instance located within NCSRD's infrastructure in the Greek trial site.

- **Readiness**

The implemented solution enables the Local Breakout (LBO) of traffic. It is important to note that the solution does not currently include the SEPP but relies on proprietary solutions.

Open5GS-Open5GS solution

- **Description**

The Open5GS-Open5GS approach will operate using SEPP. The solution is realized in the Greek site with two Open5GS core deployments, one in the NCSRD PLMN and one in OTE PLMN. The setup supports LBO roaming based on SEPP interface between the two networks. SEPP handles secure communication between the two cores, allowing devices to register, authenticate, and establish sessions across networks.

- **Readiness**

Currently only one UE can be supported for roaming experimentation.

1.3 ENVELOPE APIs Overview

As already mentioned, the ENVELOPE overall solution focuses on the exposure of APIs that enable the simplified interaction of the vertical services. In the following we provide an overview of these APIs. Detailed API specifications will also become available.

The ENVELOPE APIs are a set of APIs that are implemented within the context of the ENVELOPE project, and they are made available through the ENVELOPE Platform. The ENVELOPE APIs are accessed by a Vertical Service to interact with the Beyond 5G System. They enable a Vertical Service to retrieve network information and influence network configuration.

A comprehensive list of ENVELOPE APIs that will be available for the first OC is presented below per Trial Site:

Table 1: ENVELOPE APIs that will be available for the first OC per Trial Site

API	Description	Trial Site		
		Dutch	Italian	Greek
Quality on Demand (QoD)	Quality on Demand (QoD) allow vertical applications to request adaptation of QoS parameters for specified PDU sessions to guarantee their network requirements, e.g., minimum requested bandwidth for the uplink or downlink.	x	x	
Device Location	Device Location APIs allow the retrieval of geographical information of a device. Provided functionalities can include the verification of a device location, the retrieval of the location of a device and geofencing information (i.e., notification of devices entering or leaving a certain area.	x	x	x
Edge cloud APIs	Edge cloud APIs allow the deployment and management of applications on computed resources, and they provide information to vertical applications about the closest edge cloud server given the current device location.		x	

² Details on the available trial sites are provided in the following section.

Performance Metrics	Performance Metrics enable the retrieval of information about device performance metrics is provided as functionality by these API	x		
Predictive QoS (inference)	Predictive QoS APIs deliver analytics to vertical services (via AI/ML model inference), enabling the prediction of changes or degradation in network-level or service-level QoS parameters			x

More detailed information will be released on April.

1.4 ENVELOPE Trial Sites

Italian Trial Site

The Italian trial site offers a facility area where experimenters can test applications of the automotive and other verticals exploiting the new features introduced in B5G networks.

The main focus of the Italian trial site is to experiment with the dynamic configuration of the network to meet varying QoS demands from the end users. A further target of the Italian trial site is the automatic instantiation of applications at the far edge, edge and cloud network segments when triggered by events or by other running applications. Real-time requests of networking resources for on-demand QoS are enabled by an ENVELOPE API that interacts with the relevant components of the B5G network. Similarly, an ENVELOPE API for the dynamic instantiation of applications will be available on this trial site.

The Italian trial site hosts a B5G network that includes the HPE ANP 5GC, and a Management and Orchestration (MANO) software stack from Nextworks. The RAN equipment consists of two outdoor gNBs from SmaR-TY. Two edge servers complete the set of network-side hardware resources.

The 5GC is a fully virtualized solution that provides the components as virtualized network functions to offer a flexible deployment that can be tailored to the needs of the vertical use cases to be experimented with. The 5G core can support a dynamic reconfiguration to satisfy the on-demand QoS requests from applications. Network slices can be activated through an automatic placement of dedicated edge UPF in the relevant edge nodes.

The MANO solution is based on a multi-edge service orchestrator that operates on the inter-domain infrastructure at the application and at the network level. The edge/cloud continuum orchestrator manages the lifecycle of the applications, while the network orchestrator dynamically configures and re-configures the slices of the 5G core. The logic of the MANO is supported by AI/ML-driven closed-loops that enable the zero-touch automation of network and applications management.

The technical enablers for the Italian trial site include the support of the following ENVELOPE APIs:

- **Quality on Demand:** to allow dynamic QoS offers to UEs.
- **Edge Application Management:** to allow dynamic instantiation of applications on far edge (i.e., UEs), edge and cloud resources.
- **Device Location:** to provide information about UE position.

The experimenters will have available as UEs the OnBoard Unit (OBU) developed by LINKS. The OBU includes a 5G network modem and an RTK GNSS receiver. The carrier board of the OBU integrates a GPU to offer advanced computing resources. These 5G-enabled OBUs will be installed on at least one Automated Vehicle prototype that Teoresi makes available for experimenting with CAM applications. The experimentation will be set in public streets. For this reason, the autonomous capabilities are enabled except for the actuation that will be performed by Teoresi driver. The prototype of autonomous vehicle is based on electric microcars (L7) that have been equipped with state-of-the-art sensors such as a stereocamera Leopard, a 120° Solid State LiDAR Robosense M1 and two 360° rotating LiDAR Robosense 32 channels.

Dutch Trial Site

The Dutch trial site provides a test bed to run CAM and other vertical experiments with a B5G implementation that supports Release 17 functionalities while leveraging new capabilities introduced in B5G networks.

The Dutch trial site features a B5G network with Nokia 5G radios (KPN) and Edge / VMs (KPN). The RAN setup includes 5G-based CCAM vehicles (Siemens/Commsignia), OBUs (Commsignia), and RSUs (Commsignia). It also supports two interconnected cloud zones to run workloads for edge applications.

The main features are as follows:

- Extended B5G core based on Release 17 compliant Open5GS (commercial license from NextEPC)
- Extensions include Network Exposure Function (NEF), Network Data Analytics Function (NWDAF), extended AMF, PCF, and other NFs to support Location Reporting and UE Route Selection Policy (URSP)
- OpenAPI standard Quality on Demand (QoD), Device Location (geofencing), and Performance metrics APIs already implemented and tested in the lab
- Multi-zone cloud deployment with OpenNebula and Kubernetes

The technical enablers for the Dutch trial site include transformation functions for the following exposed APIs:

- **Quality on Demand (LF CAMARA):** to allow dynamic QoS offers to UEs.
- **Device Location:** to provide information about UE position.
- **Performance Metrics:** to enable the delivery of Key Performance Indicators (KPIs) values by the network

See also Section 1.3 for an overview of exposed APIs.

Greek trial Site

The Greek trial site is a large-scale B5G experimental facility deployed across two interconnected locations in the Athens metropolitan area: the OTE Academy campus and the NCSR Demokritos campus. It supports 3GPP Release 17 functionalities and offers a dual-network setup that includes both an enterprise-grade 5G SA network and a flexible experimental 5G-SA network. More specifically, the Greek trial site offers the following features:

- Integration of multiple 5G Core implementations (Amarisoft, Open5GS, HPE Aruba Networking Private 5G) alongside supporting software like UERANSIM, COTS UEs and programmable UEs.
- Multi-domain cloud platform (OpenNebula installation) spanning across both campuses for efficient and effective management of platform resources.
- Support of prevailing cloud orchestration platforms such as OpenNebula, ProxMox, OpenStack and Kubernetes to manage virtual machines and containerized network functions.
- Support of OpenCAPIF as a common API framework for exposed APIs authorised access and discoverability.
- Open5GS with NEF implementation of MonitoringEvent API is available for exposing UE location
- The commercially available COSMOTÉ 5G spectrum will be used for the outdoor trials.

The Greek trial site offers a variety of RAN equipment deployments attached to both enterprise-grade and experimental networks such as:

- At NCSR side:
 - two indoor cells and one outdoor cell are available by the enterprise-grade 5G-SA network.
 - a portable outdoor deployment with AMARI-RAN and a combination of available core network technologies is also supported.
- At OTE side:
 - one indoor cell and one outdoor cell connected to the enterprise grade 5G-SA network,
 - an outdoor cell supporting MOCN (Multi Operator Core Network) configuration and access to both enterprise-grade and experimental networks.

Technical Enablers/Innovations:

- **Multi-connectivity:** Early trials of ATSSS-like multi-connectivity enabling parallel network paths (e.g., using both 5G and non-3GPP access networks).
- **Predictive QoS:** Early trials of PQoS service to pre-emptively notify applications for potential performance degradation.
- **Inter-PLMN Handover** between enterprise-grade network and experimental network exhibiting Local Break Out capability.

2. ENVELOPE 1st Open Call Details

2.1. Scope

OC beneficiaries will have to either (i) make use of at least 1 API or Enabler developed by the ENVELOPE Consortium in order to validate the platform's functionality; (or) design, develop, integrate and validate a new Enabler/API, extending this way the functionality of the ENVELOPE platform

The case study where these APIs/Enablers will be applied can either be related to the automotive sector or - and most preferably - on a field other than CAM.

The rules for participation and funding in the Open Calls are subject to the General Annexes to Horizon Europe for the Work Programme 2023-2024³.

- **Submission period:** 1/6/25 – 31/7/25
- **Beneficiaries:** Beneficiaries are consortia of up to 5 legal entities that can either be SMEs, Universities or Research Institutes acting as technology and/or application suppliers for use case execution. At least half of the participants in each consortium have to be SMEs. All organizations have to be established in any of EU Member States and their Overseas Countries and Territories (OCT) or Horizon Europe Associated Country. ENVELOPE partners can NOT be involved in the grantees' projects neither their affiliates nor employees – including persons working under employment contract or contract or similar to employment contract and board members.
- **Exclusion:** Grants will not be awarded in the event of: 1. Bankruptcy, winding up, court-administered affairs, creditor arrangements, suspended business activities, or other comparable procedures (including procedures that involve persons who have unlimited liability for the applicant's debts). 2. Non-compliance with social security or tax obligations (including if such noncompliance is committed by persons with unlimited liability for the applicant's debts). 3. Commission of grave professional misconduct.
- **Countries:** Entities must be located in one of the EU Member States, its Overseas Countries and Territories (OCT), or a Horizon Europe Associated Country. Consortia having at least one member from one of the SEE (South-East Europe) nations will be favored, as one of the purposes of the ENVELOPE Project is to support European countries under-represented in European funding programmes³.
- **Funding Support:** Fixed Lump Sum per sub-project. The maximum funding per beneficiary is **€60.000** and the maximum funding per project is €300.000. A total amount of €1,350,000 will be allocated to at least 5 projects selected for OC1.
- **Duration of sub-project:** 6 months
- **Total number of proposals to be selected:** minimum 5 depending on the participants per submitted project.
- **Submissions** are available via <https://envelope-project.eu/>

2.2. Open Call-1 Timeline

Submissions to the first Open Call will be enabled on 1/6/25 and will end on 31/7/25 at 17:00 CET time. Selected projects are expected to start the definition stage on 1/12/25. Below the dates for the different phases are presented. The opening and closing dates for each phase may change in the event of modifications to the project's schedule.

³ [wp-13-general-annexes horizon-2023-2024 en.pdf \(europa.eu\)](#)

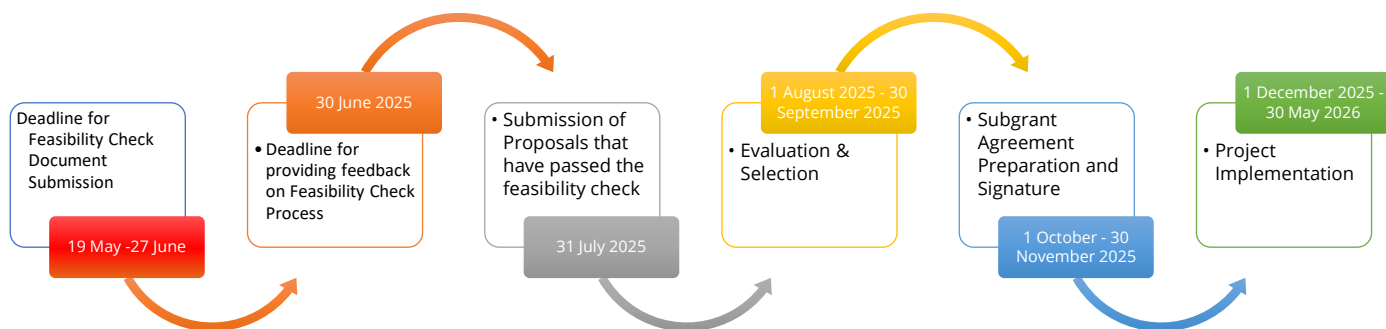


Figure 2: First Open Call Timeline.

2.3. Open Call submission and selection process

The ENVELOPE Project will apply a selection process (as illustrated in Figure 3) which guarantees the fulfilment of the EC requirements and adhere to Horizon Europe standards with respect to transparency, equal treatment, conflict of interest and confidentiality, in the management of open calls based on the indications established in the 'Horizon Europe - Work Programme 2023 -2024 General Annexes'⁴. ENVELOPE Project will apply a funnel process (i.e., selection process by phases) to select the beneficiaries.

The open call proposers are encouraged to contact the ENVELOPE consortium and communicate their intentions to verify the feasibility of the proposals intended for implementation within the project's scope. This will also allow them to receive initial feedback on the planned activities outlined in the proposal. To perform the feasibility check, a description of the planned experiment (up to one page in length) must be sent to helpdesk@lists.envelope-project.eu, using the template provided at <https://ENVELOPE.eu/open-calls/>.

2.4. Feasibility check criteria

Feasibility Check is a preliminary step in the ENVELOPE Open Calls process. Before applicants submit their full proposals, they are required to send a Feasibility Check Form. This form includes a project summary and details about the requested ENVELOPE resources. The ENVELOPE Open Calls Selection Committee reviews this information to assess the feasibility of the proposed project.

The Feasibility Check is a crucial step to ensure that proposed projects align with the goals and resources available in the ENVELOPE Open Calls. If the project passes the Feasibility Check, applicants are given the green light to proceed with the submission of a full proposal.

Feasibility check submission deadline: 27/06/2025

⁴ https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/wp-call/2023-2024/wp-13-generalannexes_horizon-2023-2024_en.pdf

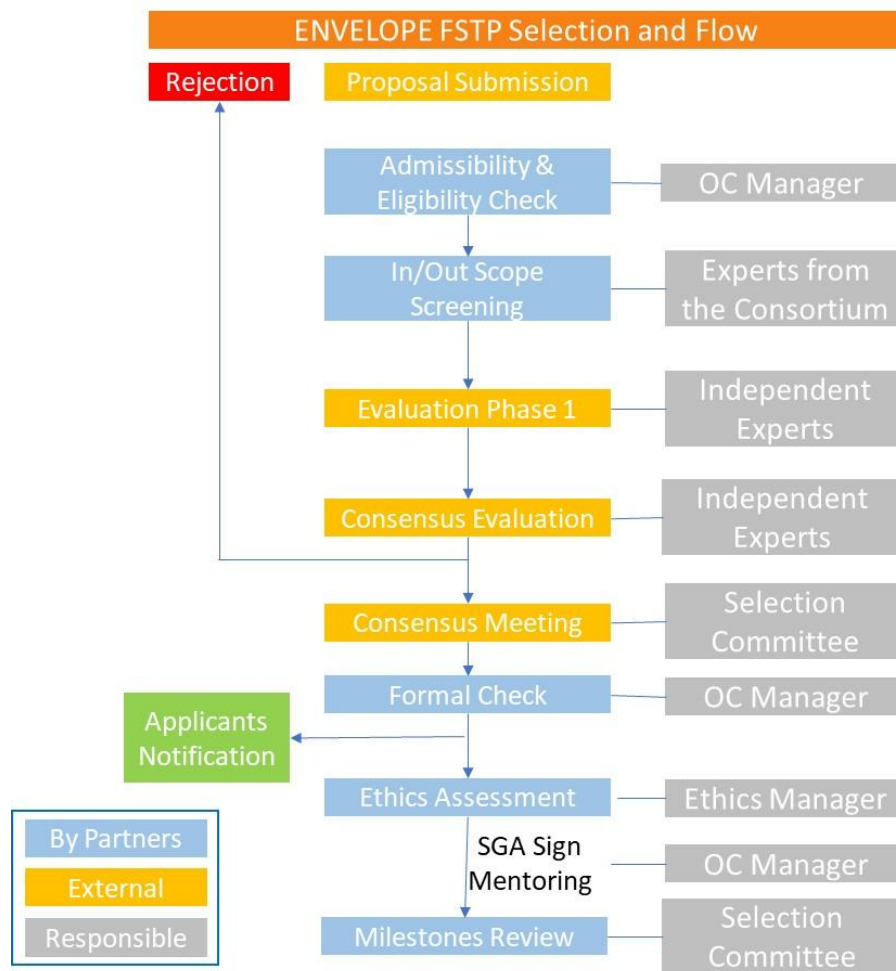


Figure 3: ENVELOPE Selection Process

Specific Criteria:

1. **Compatibility with ENVELOPE Baseline Infrastructure Technologies:** The proposed project will be assessed for compatibility with the ENVELOPE infrastructure technologies e.g., RAT for own devices, virtualization technology., etc.
2. **Adequate Resource Volume Requirements:** The proposed project must not necessitate the allocation of an excessive volume of resources e.g., number of terminal devices, vCPUs/RAM/storage per container, number of container instances, etc.
3. **Feasibility Check Document Formally Completed:** All required information for the feasibility check will be verified to be included in the document.
4. **Functionality Validation:** The proposal will be evaluated for compatibility with the functional features of the ENVELOPE facilities, ensuring the expectations/requirements of the proposed project are in alignment with the ENVELOPE platform capabilities.
5. **Alignment with ENVELOPE Technical Objectives and the Open Call Scope:** The check will assess the alignments of the proposed project with both the technical objectives outlined by ENVELOPE and the scope of the Open Call.
6. **Budget Estimation and Justification:** Accuracy and justification of the budget estimates provided in the proposal.
7. **Risk Assessment:** Identification and assessment of potential risks associated with the proposed project, along with proposed mitigation strategies.
8. **Innovation and Impact:** Level of innovation presented in the proposal and the potential impact of the proposed project.
9. **Project Timeline:** The proposed timeline is feasible and appropriate.

2.5. Admissibility and Eligibility check Criteria

All proposals received will be checked against the **Admissibility Criteria** set out in the *Guide for Applicants* which are as follows:

1. **Submission system:** Proposals need to be submitted through the online ENVELOPE Open Call management system. Proposals submitted by any other means will not be accepted.
2. **Deadline:** Proposals need to be submitted before the calls' Deadline. Applications must be submitted by the closing time and date of the open call. The time recorded by the Open Call management webpage, as submission time of the proposal, will be the official one. Late proposals will not be accepted.
3. **English-language:** English is the official language for the open calls. The proposal must be in English in all its mandatory parts to be admitted.

Additionally, proposals received will be checked against the **Eligibility Check Criteria** set out in the *Guide for Applicants* which are:

4. **Type of Activity:** The use of one of the ENVELOPE experimentation facilities is a compulsory requirement for all experimenters.
5. **Type of Third Party:** As described above.
6. Established in an **EU Member State and their Overseas Countries and Territories** or **Associated Country**.

2.6. Independent individual evaluation criteria

After the initial eligibility check, two (2) experienced external evaluators will evaluate each proposal, scoring it based on the following evaluation criteria:

EXCELLENCE:

Excellence will be evaluated according to the following criteria:

1. **Innovation:** Applications are expected to furnish details regarding the extent of novelty present in their field and the extent to which their proposed project differs from existing ones.
2. **Ambition:** Is the proposed work ambitious and goes beyond the state of the art? Does the proposal include novel concepts and approaches, new products, services or business and organisational models?
3. **Soundness of the approach** and credibility of the proposed methodology.

IMPACT:

The Impact will be evaluated according to the following criterion:

1. **Market opportunity:** Applicants are required to exhibit a well-defined understanding of their proposed course of action and the potential marketability of their new or improved product or process, for instance, how it could effectively address a specific problem in a particular field. Additionally, they must *showcase the potential of the ENVELOPE Experimental facility in their respective domains*.
2. **Commercial Strategy and Added Value:** It is required that applicants showcase the value added by their new or improved product or process, which could involve commercializing it to address a systematic issue in a particular industry or procedure rather than a specific problem instance. Moreover, *experimenters must exhibit the extra performance, power, portability, or scalability - at least in two dimensions - achieved by their experiments in the particular domain*.
3. **Environmental and social impact:** Applicants must exhibit how their project can contribute to sustainable development goals, and other European policies by demonstrating its impact on the environment, society and the economy.

IMPLEMENTATION:

Quality of the implementation: The quality and the efficiency of the implementation will be evaluated according to the following criteria:

1. **Team:** Applicants are required to demonstrate their skills in management and leadership, including their ability to develop an idea from conceptualization to market, their capacity to execute their plans, and their understanding of the market they intend to enter. The team should consist of individuals with diverse backgrounds and skillsets, and its gender balance should be taken into consideration.
2. **Resources.** Provide evidence of the quality and efficacy of the allocated resources in achieving the proposed objectives and deliverables.

2.7. Evaluation consensus group -criteria

After carrying out the Independent Individual Evaluation, the external experts who have evaluated the proposals will join in a Consensus Group as part of the Selection Committee to agree on a common position, including comments and scores for all evaluated proposals. Consensus Group will specially discuss the cases where there is a significant divergence between the evaluators' scoring. In case no consensus is reached between the evaluators, an additional evaluator will be included to provide an extra evaluation.

2.8. Panel meeting - criteria

The 'Selection Committee' including the 2 external experts who participate in the Independent Evaluation and the internal Ethics Manager (ISI) will decide, at this stage, the 'List of finalists'. Whilst normally the highest ranked proposals will be selected for funding, the Selection Committee might have fair reasons for objecting to a specific third party, like the alignment with ENVELOPE Project goals and scope, the ability to achieve the highest impact possible, as well as the existence of significant ethical concerns or a potential conflict of interest. In this case, the choice may pass to the next-ranked proposal. The exact number of proposals approved will be decided based on the overall quality of the proposals.

Contact us: helpdesk@lists.envelope-project.eu