Deliverable 3.1

Open Call Process Documents

DISSEMINATION LEVEL		
PU	Public	**X**
CO	Confidential, only for members of the consortium (including the Commission Services)	

COVER AND CONTROL PAGE OF DOCUMENT	
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[1] **R**=Report, **DEC**= Websites, patents filling, etc., **O**=Other

[2] **PU**=Public, **CO**=Confidential, only for members of the consortium (including the Commission Services)

Change Control

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Table of Contents

Executive Summary

One important part in the CPSE Labs project is the Open Call Process.

Throughout the project, three Open Call rounds will be held. During each of these calls, experimenters and other third parties will have a chance to apply for small projects funded by the European Commission and defined by the CPSE Labs partners. This is done following a protocol of steps that have been defined before the start of the process in Month 3 of the project (April, 2015).

The current document compiles the templates and documents that are necessary to perform this process efficiently.

As this process is not evident, the first sections of the deliverable will delve in the general description of the process.

Each template or document is described shortly in one page. The documents are included within this document.

1   Introduction

The CPSE Labs Project (full name CPS Engineering Labs – expediting and accelerating the realization of cyber–physical systems) is a 36–month innovation action within the Horizon 2020 Programme. Starting in February 2015, CPSE Labs aims, among several ambitious goals, to expand engineering of Cyber-physical Systems (CPS) offering a marketplace to European Small & Medium–sized Enterprises (SMEs) and other entities that may profit from this technology (Non-for-profit organisations, public administration, etc; this document will use the term "experimenter" to encompass both SMEs and these other third parties). This will be achieved by offering these third parties a chance to perform **experiments** on specific topics that the CPSE Labs nine main partners will distribute through six **Design Centres** distributed through Europe.

This goal is achieved through a process of **Open Calls**. The Open Call Process is important and relevant for several reasons, including but not restricted to legal and financial considerations. It is the obvious goal to have experimenters work on CPS, but this will require several steps to ensure that the procedure is strictly followed by the book – which, in turn, requires a book to follow.

The general process includes steps from several partners: Each partner in the CPSE Labs project belongs to one of the design centers. During an open call round, each Design Center can publish one or more call topics, suggesting small experiment topics that experimenters can execute with the assigned budget from the project. Interested third parties will send their proposals for experiments within this topic. A process will be followed to select the best experiment proposal or proposals, including evaluation from independent evaluators. Once a proposal is selected, a contract will be signed with that third party. The experiment will be performed and reviewed.

The partners of CPSE Labs have designed such a practice to conduct the Open Call Process. It is discernibly useful to resort to patterns and guidelines for purposes of homogenization of the results, not to mention the added advantage of reducing potential errors and mistakes –that may be prohibitively expensive to correct– by using mandatory fields. Non-intuitive operations can also make good use of guidelines, and any help that the final user can need.

The current deliverable delves into these kinds of templates and guidelines. Before publishing the very first Open Call in Month 3 of the project, the CPSE Labs members have elaborated all the documentation that is needed throughout the process.

2 Open Call Process Overview

Deliverable 3.1 is titled **Open Call Process Documents** and presents the *Collection of guidelines, templates, and supporting documents.*[i]

D3.1 cannot simply be a directory gathering several other files. It will try to describe their use following a template. D3.1 also gives some detail on each of the documents, talking about their use.

This document is developed and delivered on Month 3 of the 36-month project, with the templates being created before the first open call of three. The documents within D3.1 are as of April 2015. Theoretically, the documents could be updated in later stages of the project, or other documents may become necessary. In that improbable case, a new version of this deliverable would be handed over with the corrections and/or expansions.

2.1 Description of the Open Call Process

This document does not try to be a detailed description of the Open Call Process, although the latter feeds from it. We will first include a short description of the Process to use it as a reference.

This is a short description of the process:

- The members of the project are distributed across six Design Centres: France, Germany North, Germany South, Spain, Sweden and UK. Each Centre is associated with one or more CPSE Labs Centre partners.

- The project has three rounds of calls scheduled for months 3, 9 and 15 (April 2015, October 2015, and April 2016).

- During each of the rounds, each of the Design Centres may issue one or more Call. The Calls will solicit experiments of the following three subjects: Transfer to new Domain, Value chain Completion, Transfer to new Use Case.[ii] The Call will be notified to the public in a Call Announcement.

- When a Call is published, each Design Centre may open one or more Topics, which will be public. A Topic is a short description of a project that the Design Centre wants to be executed by, e.g., one experimenter (or a consortium of experimenters).

- Experimenters and other organizations write Experiment Proposals and sent them to the CPSE Labs system. These proposals need to include very specific information and, considering that the experimenters may not be familiar with European projects, CPS and other issues, CPSE Labs will require them to follow a template.

- CPSE Labs will have an evaluation system to select the best Experiment Proposals. The evaluators, who are not partners of CPSE Labs, will also follow a template.

- After the evaluation made by external experts, the CPSE Labs consortium will review the results of the evaluation and, considering this and other criteria, the consortium will select the Experiment Proposal [iii]to be funded.

- Once an Experiment Proposal is selected, the Design Centre will contact the Experiment Proposal's authors and offer them a Contract to perform the experiment.

- After the signature of the contract, further documents will be needed, including Implementation Plans and Reviews.

- An experiment will be wrapped up in form of reporting and/or demonstration.

2.2 Description of the Open Call Funding Process

The funding of the experimenters is an important part of the Open Call Process, which is performed in line with the conditions in the project's Annex K.

This information will be provided to the experimenters wanting to write an Experiment Proposal, as it affects them directly.

Steps in the process:

- The Open Call is published, including topics.

- One experimenter (or consortium of them) successfully applies for a Topic, and is offered a contract.

- When the Experiment begins, the experimenter can receive a pre-financing of 20% of the total funding of the Experiment,which is transferred by the Design Centre to the experimenter.

- The Experiment is started.

- In the middle of the Experiment (e.g. month 5 for a 9-month experiment), the Design Center may transfer up to another 30% of the total funding of the Experiment to the experimenter, depending on successful completion of milestones and deliverables

- The Experiment is completed.

- The Design Centre checks the results of the Experiment.

- The results are of the experiment are verified. Assuming that they are satisfactory, the process continues.

- The Design Centre (represented by the CPSE Labs partner managing that Centre) transfers the remaining amount (generally 50% of the experiment funding) to the experimenter.

Considering the eligible costs to be the direct costs plus a 25% of these as indirect costs: Industrial applicants are re-imbursed 70% of the above mentioned overall eligible costs. Non-profit bodies and educational establishments are re-imbursed 100% of the overall eligible costs. All the experimenters, have to justify the expense of 100% of the costs.

2.3 Templates associated to the process

There are several templates on the different stages of the Open Call Process:

- The Open Call Publication Document is the official document to publically notify the start of an Open Call, including important details such as the start date.

- The Topic Proposal (call text for open call experiment) will be filled in by the Design Centre and publically distributed. The experimenters read this document and can respond by submitting an experiment proposal.

- The Experiment Proposal. A template (experiment proposal template) filled in by the experimenters to respond to one specific Topic Proposal in one specific Open Call. It will be sent to CPSE Labs for evaluation.

- The Evaluation. Each Experiment Proposal will be reviewed by at least two independent evaluators. Each evaluator will fill in one of these templates for each Experiment Proposal he or she reviews.

- The Contract. This contract is signed by the experimenter and the Design Centre. This document specifies the responsibilities and obligations of each of the involved parties.

2.4   Other documents associated to the process

Some documents are also related to the Open Call Process but are not an inherent part of it. More specifically, the guidelines and tutorials that people may want to check before filling in certain areas.

- The Guide for Proposers: This is a very detailed, thorough FAQ written by the University of Newcastle with support from the other partners. Experimenters are expected to check this document for any questions. Moreover, they will also have contact people from CPSE Labs that will help with more specific questions. CPSE Labs will constantly expand the FAQs document with inquiries not included before.

3 Open Call Publication Document

This is a description of the Open Call with details about what it will cover.

This document is unique per call, affecting all the Design Centres and Topics of a call.

Whenever an Open Call is generated (month 3, 9 and 15), a such an announcement document will be issued to specify the details of the Open Call – some of which will vary, including the dates and foreseen funding.

This document will be uploaded to the public website of CPSE Labs.

Dissemination (WP5) will be in charge of making it known through other means, such as using social networks and the like.

3.1 Document

Below we provide a generic template of the call announcement document.

Cyber-Physical Systems Engineering Labs: [1st/2nd/3rd] open call for innovation projects

European technology and engineering firms and innovators are invited to submit proposals for small-scale experiments to advance the development of innovative products and services in the area of cyber-physical systems (CPS).

[Description of call, ½ page]

Call opening:	[date]	Proposal language:	[Language]
Call deadline:	[date and time]	Full call details:	[URL]
Call acceptance:	[date]	Submission:	[e-mail address]
Call identifier:	[ID]		

[Description of contact details]

Project acronym:	CPSE Labs
Project full title:	CPS Engineering Labs – expediting and accelerating the realization of cyber-physical systems
Project grant no.:	644400

4 Topic Proposal

This document includes the information on the scope and conditions of an experiment proposal.

A Topic belongs to a specific Call and to a specific Design Centre.

This document is distributed publically.

Third parties will use this document as the basis to apply for an experiment.

The document is written by a CPSE Labs partner, and then it is distributed by a Design Centre and published online in the CPSE Labs website.

Experimenters will read the document and, if they are interested, they will apply for an Experiment by sending an Experiment Proposal.

It is important to focus on certain aspects such as the Impact of the experiment.

4.1 Document

Below we provide a shortened outline of a typical Call Topic description. The Call Topic documents for the first round of Open Calls is provided in deliverable D3.3.

Call Topic – First CPSE Labs Open Calls

Call Topic	
Call ID	
CPSE Labs Design Centre	
Indicative Budget	
Expected Number of Funded Experiments	Between 1 and 4 (will share the budget).

Overview This call targets innovative approaches of realizing Cyber-Physical Production Systems (CPPSes) based on ….

Objectives The main objective is the establishment of a platform for safe water purification in seaport towns. The experiment should demonstrate the use of the technologies
provided by the design centre, but is not limited to these technologies. It has to address
one or more of the following topics:
• Use interoperable tool set for the engineering of CPS in terms of managing energy-related issues with water…
• Create innovative architectures to integrate industry issues with…
• Establish novel value chains and business roles in the production domain by providing ….

Type of experiment [Transfer to new use case / Application Domain / Value Chain Completion]

Provided Platforms and Equipment For the experiments the design centre provides the following equipment at the given Technology Readiness Levels (TRLs):
• **SOFIA** (TRL 9) is an open-source interoperability platform [description]
For more information see http://www.sofia2.com
• **TECH 1** (TRL 6) is …. For more information see http://…
The design centre provides access to the platforms and assistance and coaching on the
relevant technologies.

Design Centre Support The design centre provides:
• Technical support for the deployment of SOFIA2
• Assistance and coaching for the development of the experiment on SOFIA2.
• …

Expected Results The experiments are supposed to develop, establish, or validate tools and approaches for industrial use. They should enhance current state-of-the-art in industry towards the
(specific issue).
The outcomes of the experiment will be evaluated following these KPI's:
• Comparing the current situation of (X) with the preceding one.
• Exhibiting the demonstrators in front of partners of CPSELabs and members of the European Commission.
• …

The approach for this proposal should go toward the development of an open-source technology that can be used by final users/industrial corporations/town council administration to improve the life quality of the citizens by increasing the … and by creating dedicated jobs in less than two years from the implementation.

Restrictions for applicants: None.

5 Experiment Proposal

This document is completed by a third party, a potential experimenter. The Experiment Proposal identifies a Topic and describes plans for an experiment which meets the specifications of the Topic.

Third parties interested in a Topic will fill in this template.

The template will then be sent to CPSE Labs using the means as specified on the CPSE Labs website.

All the received templates will be analyzed by evaluators and each will receive a score. Experiment proposals will be selected for funding based on the scores provided by independent evaluators. Successful experiment proposals will be offered a contract to execute the experiment.

5.1 Document

Experiment Proposal Template

CPSELabs – Open Call Action

Title of Proposal:

Name of target design centre: Choose an item.

Type of experiment: Choose an item.

Call Topic ID:

List of participants

Participant No *	Participant organisation name	Country
1 (Coordinator)		
2		
3		
4		

Experiment Title

Experiment Summary

A summary of your experiment should go here. The complete experiment proposal must be written in English. Your proposal document should not exceed 10 pages, excluding the title page.

You can assume that the experiment proposal evaluators will be experienced in engineering, computer science, embedded systems or similar fields. However, they may not specialize in your own domain, so any highly-specialized descriptions should be written to be accessible to someone with a general background.

Maximum 2000 characters for summary

1 Excellence

Concept and Objectives

Introduce the concept of your experiment here, and also list your objectives.

Suggested page limit: 1 page

Progress beyond State of the Art and Innovation Potential

Here you should discuss current state of the art and how your experiment will enable you to take your technology or product beyond the state of the art. Describe the innovation potential of the experiment.

Suggested page limit: 1 page

Targeted Cyber-Physical Systems product/technology/service description

In this section you should describe the details of the Cyber-Physical Systems (CPS) technology or product you will develop as a result of your experiment. You can read about CPSs on the CPSE Labs website http://www.cpse-labs.eu if you need guidance.

Suggested page limit: 0.5 page

2   Impact & Exploitation

In this section, describe the industrial relevance and potential impact of your experiment, as well as your plans for exploitation of the results and the future business view. Your discussion of impact should include clearly stated **innovation objectives**. Check the FAQs on the website www.cpse-labs.eu for guidance on innovation objectives.

Impact is important for evaluation of experiment proposals. A discussion of the impact of your experiment proposal could discuss how experiment results can contribute to and affect:

- Turnover and/or profit
- Employment
- Market size – of your field, or of your organization(s)
- Intellectual Property management

- Sales
- Return on investment

This is not a comprehensive list – if your experiment will have an impact on other areas of your organization, your local community or your business market you are welcome to include them.

Suggested page limit: 3 pages

3   Implementation

Work plan

In this section provide a description of the work plan. This should include:

- Project duration
- Workpackages, milestones & deliverables
- List of necessary competencies
- The CPSE Labs platforms/technologies that may be used

Suggested page limit: 1 page

List of partners

Describe briefly the relevant expertise and experience of each partner, showing that they are a good choice to contribute towards the experiment. Evaluators will consider how well the proposers in a consortium complement each other.

In the table below provide details of all organizations which are jointly submitting the experiment proposal, one partner per table row. If you are submitting a proposal without a consortium, include your own organization details here. If you expect all partners to participate for the full duration of the experiment, "Project Entry Month" will be *1*, and "Project Exit Month" the final month of the project.

Partner	Project Entry Month	Project Exit Month	Expertise
Partner name	*1*	*…*	*Experience and expertise of the partner*

Justification of costs

In Table 1 below, provide details of the person months allocated to each partner.

Partner	Tasks	Total person months	Monthly rate for personnel costs (per partner)
Partner 1 name	*Description 1*	*3*	

In Table 2 below, provide a list of other direct costs that will be incurred (equipment, travel etc).

Partner	Item Description	Total Other Direct Cost (for partner)
Partner 1 name	…	…

In the table below, provide details of the direct and indirect costs, and the experiment budget allocated to each partner. See footnotes for further help with calculations.

Partner	Total Personnel Cost (A)[3]	Total Other Direct Cost (B)[4]	Indirect Cost (C) [5]	Total experiment budget (D)[6]
…				

In the table below, calculate the requested financial support for each partner.

Partner	Total experiment budget (D)	Reimbursement rate (70%/100%) (E)[7]	Requested financial support
Partner 1 name	…	Choose an item.	This will be (D) * (E)

Ethics Screening

All experiments must be "ethics-ready" for Horizon 2020 funding by identifying and detailing procedures to deal with any ethics issues that may arise from the experiment. Please answer the following three questions. If the answer is 'Yes' to any of the questions, an ethics return must be completed along with the proposal. Please contact the CPSE Labs Service Centre (service@cpse-labs.eu) for advice.

Does the experiment involve human participants?	Choose an item.
If Yes, participation of persons must be entirely voluntary and you must obtain (and clearly document) their informed consent in advance. You must provide an "information sheet" and "informed consent form" for all participants. Please contact the CPSE Labs Service Centre (service@cpse-labs.eu) for advice on these forms.	

Does the experiment involve personal data collection and/or processing?	Choose an item.
If Yes, you must provide details of procedures for data collection, storage, protection, retention, transfer, destruction, and re-use. Please contact the CPSE Labs Service Centre (service@cpse-labs.eu) for advice.	

Does the experiment involve any of the following: • Human Embryonic Stem Cells (hESCs); • Human embryos, or human foetal tissues / cells; • Animals; • Third countries (i.e. non EU Member States) • Elements that may cause harm to the environment, animals or	Choose an item.

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[3] A is calculated as (Total person months * Monthly rate for personnel costs) using information provided in Table 1

[4] B should be same as Total Other Direct Costs in Table 2

[5] Indirect Costs (C) is calculated as follows: C = A + B * 0.25

[6] Total experiment budget (D) is calculated as follows: D = A + B + C

[7] The reimbursement rate varies for commercial and non-profit legal entities. Visit our website www.cpse-labs.eu/faqs.php, or email service@cpse-labs.eu for help.

plants; • Elements that may cause harm to humans, including research staff; The potential for malevolent/criminal/terrorist abuse?	
If Yes, you must seek advice from the CPSE Labs Service Centre (service@cpse-labs.eu) on completing a detailed ethics report.	

To submit your experiment proposal, please read our FAQS online at www.cpse-labs.eu, then complete this template and email it to **open-calls@cpse-labs.eu**

6 Acknowledgement of receipt

This document will be automatically sent to an experimenter whenever an Experiment Proposal is received by CPSE Labs.

It will only be sent to the submitting experimenter after the Proposal is correctly received.

The document will be customized with the appropriate contact details of the author(s) submitting the experiment proposal.

6.1 Document

Acknowledgement of receipt

Dear <Name>,

Thank you for submitting your proposal for consideration as industrial experiment in the H2020 project CPSELabs.

This evaluation will take place in the next few weeks. You will be notified as soon as possible after this of whether your proposal has been successful or not.

On behalf of my colleagues in the project I would like to thank you for your interest in our activities.

Yours sincerely,

The CPSE Labs team

7 Evaluation

This is the template of the document that will be filled in by the evaluators.

For a given Topic, several Experiment Proposals are foreseen to be received. Each will be evaluated by neutral, approved, external evaluators. The scores they give will be registered in this document. Once all the scores are received, the Experiment Proposal will be selected for funding.

Each Experiment Proposal must be reviewed by at least two evaluators, who will measure individually certain aspects (e.g. the impact of the proposal) – all the evaluators will evaluate the whole proposal, grading each of the evaluated aspects.

The evaluators will receive the Proposal and grade it. The grade (and any comments) will be registered in this document.

This document will not be public. It will be available only to the author, members of CPSE Labs Project and members of the European Commission. Other evaluators involved in the same proposal may have access to this document to write the Consensus Form (see Section 8) if the author agrees.

7.1 Document

Below we provide an example of a filled in evaluation template.

Evaluation Template #[ID]

Evaluator

Evaluator Name: Dr. John Smith

Evaluator Contact Information: dr.john.smith@miskatonicuniversity.com

Experiment Evaluation

Experiment ID: 12345

1. Excellence Note: when a proposal only partially addresses the topics, this condition will be reflected in the scoring of this criterion	**Score:** **(Weight 1; Threshold 3/5)**
2. Impact:	**Score:** **(Weight 2; Threshold 6/10)**
3. Quality and efficiency of the implementation:	**Score:** **(Weight 1; Threshold 3/5)**
Overall Comments:	**Overall score:** **(Threshold 12/20)**

Experiment Name: Development of Cyber-Physical System for Water Depuration in the Seaport of Lugo

Experiment Responsible Contact Information: Xan Ferreiro xanfereiro@lugoadmin.org

Date of the evaluation: July 10th, 2015

The CPSELabs project is co-funded by the European Community's Horizon 2020 Programme under grant agreement n° 644400.

I, [evaluator name], hereby certify that the information above is truly and accurately my official evaluation of the mentioned experiment in the given date.

[physical signature of the evaluator]

8 Consensus Form

This is the template of the document that will be filled in *jointly* by the evaluators.

After each evaluator has graded a proposal and filled in the Evaluation document, all the evaluators involved in a same proposal must meet (physically or virtually) and discuss for at most 1 hour per proposal. They will then fill in a Consensus Form for that proposal, specifying the grades and including comments and opinions if needed.

The evaluators will then submit to the CPSE Labs members the Consensus Form along with the individual Evaluation documents of the proposal (even if these may have become obsolete).

This document will not be public. It will be available only to the author, members of CPSE Labs Project and members of the European Commission.

8.1 Document

Below we provide an example of a filled in evaluation template.

Consensus Template #[ID]

Evaluators (in alphabetical order):

Name	Contact information	Evaluation Form ID
Dr. John Smith	dr.john.smith@miskatonicuniversity.com	#5613543
Jane Runner	janerunner@acme.com	#2378324

Experiment Evaluation - Consensus

Experiment ID: 12345

	Score:
1. Excellence Note: when a proposal only partially addresses the topics, this condition will be reflected in the scoring of this criterion	**(Weight 1; Threshold 3/5)**
2. Impact:	**Score:** **(Weight 2; Threshold 6/10)**
3. Quality and efficiency of the implementation:	**Score:** **(Weight 1; Threshold 3/5)**
Overall Comments (including Dissenting Views):	**Overall score:** **(Threshold 12/20)**

Experiment Name: Development of Cyber-Physical System for Water Depuration in the Seaport of Lugo

Experiment Responsible Contact Information: Xan Ferreiro xanfereiro@lugoadmin.org

Date of the consensus: July 15th, 2015

We, [evaluator names], hereby certify that the information above is truly and accurately our official consensus of the mentioned experiment in the given date and based on our respective previous evaluations.

[names & physical signatures of the evaluators in alphabetical order]

9 Confidentiality and conflict of interest declaration

This document will be offered to the evaluators before they are given any confidential document related to the CPSE Labs project.

The evaluator will have to sign it before they are given the proposals to evaluate.

9.1 Document

I the undersigned declare that, in participating as an independent expert in the evaluation of proposals received in the competitive call of the H2020 project CPSELabs.

I undertake to treat as confidential all information contained in the proposals which I am asked to evaluate, both during the evaluation and afterwards.

I will not reveal to any third party the identity or any details of the views of my fellow evaluator(s), neither during the evaluation nor afterwards

I do not, to the best of my knowledge, have any interest in any of the proposals submitted in this call, I have not been involved in their preparation and I do not benefit either directly or indirectly from the eventual selection. Should I discover a conflict of interest during the evaluation, I undertake to declare this and to withdraw from the evaluation.

Name	
Signature	
Date	

10 Contract

This document is a general template for a contract between a Design Centre of CPSE Labs (which acts as a middleperson for the European Commission) and one experimenter (or a consortium of experimenters) for the execution of an Experiment Proposal.

This document will include the general outline of issues to ensure that all the legal requirements of the European Commission and of a project of this nature are covered.

It will also detail all the legal issues that the experimenter must know – for instance, methods of payment, audit responsibilities, etc.

It will nonetheless require customization in many issues for every contract that is strictly signed.

The Contract will be offered to the organisations which submitted successful experiment proposals, with the necessary customizations.

11 Guide for Proposers

This document is a guideline for third parties wanting to know specific details of the Open Call process. It is aimed to potential Experiment Proposal writers.

Questions that the final users may have will be answered in a comprehensive way in this document.

External users at any stage of the process will resort to this guide to solve their questions. This may happen at the beginning of their activity (to discover the specifics of an Open Call) or at a later stage (to see how to write an Experiment Proposal).

Should the Guide not solve the questions, CPSE Labs will have people who can answer their questions via e-mail or telephone.

The FAQ is not a necessary part of the process but it horizontally affects all the stages.

11.1 Document

Frequently Asked Questions and Guide for Experimenters

FREQUENTLY ASKED QUESTIONS

Here we explain the process for submitting an experiment proposal

I would like to apply for funding or technical support. How do I get started?

Help and support for businesses always comes from one of our six state-of-the-art design centres. The design centres provide help for businesses by funding and supporting experiments.

This process begins when the design centre publishes a call for experiment proposals, listing the types of experiments and technologies they are prepared to consider. Start by taking a look at the current calls to find one that's right for you, or look through our design centres' areas of expertise.

What is an experiment?

An experiment is an innovation activity, designed and suggested by businesses themselves and funded by CPSE Labs.

CPSE Labs design centres publish occasional calls for experiment proposals. The calls describe the experiment topics which will be accepted, and the deadline for submitting an experiment proposal. Engineering and technology businesses then submit their proposals for experiments that they would like to carry out. The experiment proposals are evaluated by independent experts and the best will be selected to receive funding and support.

Will my experiment proposal be eligible for support from CPSE labs?

There are a few criteria that must be satisfied to ensure that your experiment proposal is eligible for CPSE Labs funding. We strongly recommend contacting our service centre if you have any queries about eligibility, and to take advantage of the pre-proposal check service. Contact details are contained in the back of this booklet.

Our eligibility criteria include the following:

- Experiment proposals must be submitted in response to a published call for proposals, must meet the criteria outlined in the call and must be received before the specified deadline. Note that CPSE Labs specifically funds experiments in the area of cyber-physical systems (CPSs). CPSs span many technologies and engineering disciplines, and a large number of technology businesses are already capable of contributing towards CPSs. Read about cyber-physical systems in this document, and feel free to contact our service centre if you have any queries.

- Funded experiments will need to be one of the following experiment types:
    o Experiments designed to transfer an existing technology to a new domain
    o Experiments designed to help you and your partners complete a value chain (e.g., adding a new partner or service provider to your existing value chain); or
    o Experiments designed to transfer an existing technology to a new use case.

  Types of experiments are described in detail later in this document.

- The experiment proposal must be submitted by organisations established in one of the member states of the EU or in an associated country.

- Requested funding for the proposed experiment should be in the region €50,000 to €150,000 per organisation. Read more about costs and funding here.
- Duration of the proposed experiment should be 9-18 months.

Please don't hesitate to contact service centre if you have questions about eligibility.

What are the types of experiments I can propose?

An experiment can include different types of activities, but, for CPSE Labs, experiments must be designed to achieve one of the following innovation objectives:

- Transferring a technology to a new domain. Experiments in this category include activities that extend the ecosystem of a technology or platform by transferring existing technologies to a new domain or application area. The experiment should be designed to increase the Technology Readiness Level (TRL) of the technology significantly in the new target domain, to reach at least the same level as in the original domain.

- Value chain completion. Experiments in this category include activities that will allow you to add new enterprise partners to your value chain. For instance, this could include conducting research to integrate products from a new service developer or component manufacturer to an existing or new value chain. Experiments should be designed to ensure technology validation, and should result in a significant TRL improvement (typically 2-3 levels) of the technology offering at the end of the experiment.

- Transferring technology to a new use case. Experiments in this category will include activities that apply an existing technology to a new use case. Examples could include activities to add new functionality to an existing technology, or to lower the barriers to adoption of the technology, or to improve the performance of an existing technology (as long as there is a clear commercial benefit).

How do I know which design centre to contact? Do I have to contact the design centre closest to me?

You can contact any of our design centres; you do not need to be located in the vicinity of your chosen design centre. Our design centres each have different, complementary expertise and skills, and each has separate calls for proposals explaining topic technologies and topics they are prepared to consider. We recommend looking through our six design centres to find the one that best suits your needs.

CPSE Labs is part of the Smart Anything Everywhere initiative. If you have an experiment idea that does not match the topics in CPSE Labs, you can also check the Smart Anything Everywhere website for our sister projects which offer support for different technologies and topics.

The design centres are located in France, UK, Sweden, Spain and Germany. Do I need to be based in one of these countries to submit an experiment proposal?

Experiment proposals are very welcome from organisations located in any EU member state or in an associated country.

What is the expected duration of an experiment?

Experiments should be designed to be completed in a minimum of 9 months and a maximum 18 months.

What are cyber-physical systems? How do I know if I am working in cyber-physical systems?

Many technology and engineering firms will discover that they are already capable of contributing towards cyber-physical systems. Read about cyber-physical systems in this document and contact our service centre if you have questions.

What is an experiment consortium?

If you choose, your business can group together with other organisations to create a joint experiment proposal. The group forms a temporary consortium (consisting of independent partners) for the duration of the experiment. Forming an experiment consortium allows you and your regular business collaborators (or new organizations with whom you have not worked with previously) to undertake joint innovation and development that would benefit all parties.

For example, forming a consortium with other businesses would be an excellent way to explore development of new types of products or services, using components, software and/or services supplied by multiple businesses.

If you are interested in forming a consortium, we recommend that the partners involved jointly establish a private "consortium agreement", to ensure that responsibilities, effort, intellectual property and costs are allocated unambiguously between the partners (you are not required to submit details of any such agreement as part of the experiment proposal submission process, however). The experiment proposal should detail the activities that each of the consortium partners will undertake during the experiment, and how costs will be allocated between the partners.

A consortium should nominate one partner as the co-ordinator; this partner takes responsibility for managing the contributions of the separate partners and liaising with the host CPSE Labs design centre during the experiment duration.

How big should my consortium be?

We recommend 2-4 partners as an ideal size for a consortium, but we can also accept experiment proposals from consortia outside this range.

Do we need a minimum number of European countries represented in the consortium?

There are no constraints regarding the minimum/maximum number of countries represented in a consortium for CPSE Labs experiment proposals. However, all partners in the consortium must be located in an EU member state or in an associated country.

Can I apply as a single organization, or do I have to form an experiment consortium?

We strongly encourage consortia to create joint experiment proposals. However, experiment proposals are also accepted from individual organisations.

What is the minimum/maximum funding available for an experiment?

Please check the details of the call for proposals for full details; indicative budget for experiments is stated in each call.

Can I submit more than one experiment proposal? / I've submitted an experiment proposal to CPSE labs previously - can I submit another?

Yes, organizations are welcome to submit more than one experiment proposal to us. Please note, however, that CPSE Labs cannot award more than €150,000 in total to one organisation. This means that if an organisation has already received €150,000 from CPSE Labs, that same organisation cannot apply for further CPSE Labs funding.

Organisations which have received less than €150,000 from CPSE Labs for previous experiment proposals may submit new experiment proposals, as long as the total funds received for all experiments will not exceed €150,000.

Please talk to a design centre or our service centre if you have any questions about eligibility.

I've got an idea for an experiment but it does not match currently available calls for proposals/I've missed the deadline for experiment proposals.

CPSE Labs is only able to accept experiment proposals which match currently published calls. Deadlines for each call are fixed and we are unable to accept late submissions.

CPSE Labs is part of the European Union-funded Smart Anything Everywhere initiative. If you have an experiment idea that does not match the topics in CPSE Labs, you can also check the Smart Anything Everywhere website for our sister projects, which offer support for different topics.

How much total funding is CPSE labs making available for experiments?

CPSE Labs expects to make €2,175,000 available across all of our design centres.

What funding is available to experimenters?

When carrying out experiments you will incur costs which are eligible for funding by CPSE Labs. Different funding rates are applicable for commercial and for non-profit legal entities.

The total funding CPSE Labs can provide to experimenters will be:

- Costs will be re-imbursed to industrial applicants at the rate of 70% of (direct costs + 25% indirect costs)

- Costs will be re-imbursed to non-profit bodies and educational establishments at the rate of 100% of (direct costs + 25% indirect costs)

If you have questions regarding funding, please get in touch with our service centre.

In addition to funding, you can also receive benefits such as expertise, advice or effort from your host design centre (i.e., the design centre which issued your selected call). Your experiment proposal must make clear what is required from your host design centre. See the call for proposals for your intended design centre for more information.

What is the process for submitting an experiment proposal?
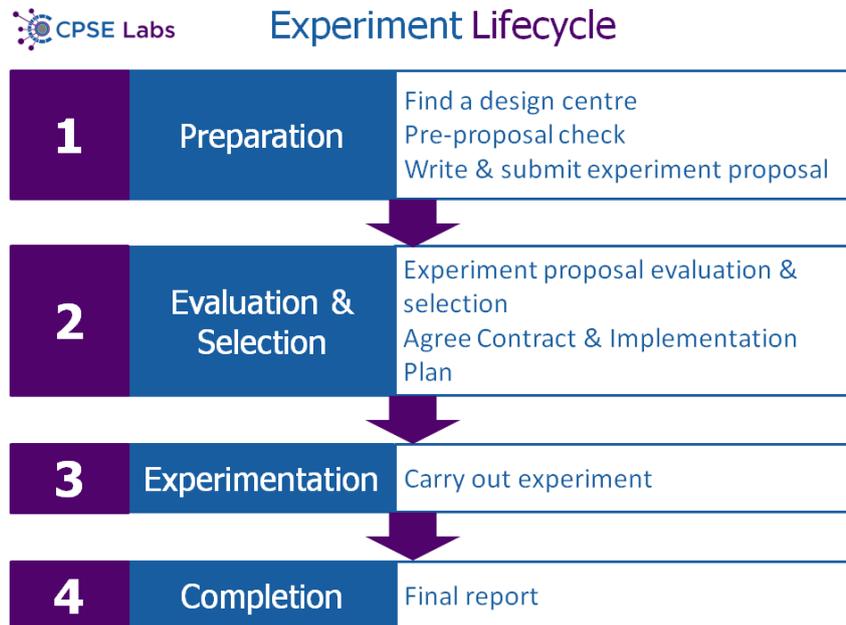
1. **Find a design centre.** CPSE Labs incorporates six design centres, located around Europe, each with a different skill set and an international reputation for excellence. Each will issue occasional calls for proposals, detailing the topics and technologies they are prepared to consider funding.

2. **Pre-proposal**. Collect the information you need (and invite your partners to form a consortium if applicable). If you wish, you can submit a pre-proposal to your chosen design centre; the design centre staff will use this to clarify whether the proposal fits into the scope of their current calls and whether it will be eligible.

3. **Write and submit your experiment proposal.** Write and submit your experiment proposal using our template (available on our website).

4. **Experiment proposal evaluation**. CPSE Labs conducts an independent review process to assess all the submitted experiment proposals, rank them, and select the best based on the ranking. At the end of the evaluation proposers will be contacted with the results.

5. **Contract and implementation plans**. Authors of successful experiment proposals will agree a Contract and an Implementation Plan with their host design centre.

6. **Experimentation.** 20% of the funding will be transferred at the start of the experiment. During the course of the experiment, there are regular progress reports from the experimenter to the host design centre.

7. **Final report**. Experiment is concluded, and final review conducted. Final funding is transferred on completion of a satisfactory final report.

How do you define a small/medium enterprise (SME)?

Whilst experiment proposals are welcomed from all eligible organisations, we especially encourage small and medium sized technology businesses to submit an experiment proposal. Our proposal submission process, reporting obligations and review process have all been designed with the needs of SMEs in mind.

The European Commission generally defines SMEs (small and medium enterprises) as businesses which have fewer than 250 employees AND one of the following:

- Turnover <= €50m, or

- Balance sheet total <= €43m

However, defining SMEs can be complex - please check the EU policy for further clarification.

What is a pre-proposal?

A pre-proposal describes the core ideas of a planned experiment proposal. You can submit a pre-proposal to your intended design centre, before committing to writing a full experiment proposal. Design centre staff will then check the pre-proposal for you.

Note that this service is limited to clarifying whether the experiment proposal fits into the call's scope (i.e., it is compatible with the current call regarding the chosen scenario, research focus, expected innovation etc.) and whether it is likely to be eligible.

What information is needed in the experiment proposal? Is there a template for an experiment proposal?

Template documents for experiment proposals are available on our website.

What is the maximum/minimum length of an experiment proposal document?

Experiment proposals must not exceed 10 pages, excluding the title page. Please use our proposal template (available via our website) to write your experiment proposal.

Who will evaluate experiment proposals?

CPSE Labs will appoint independent evaluators to score the submitted experiment proposals. Evaluators may be academics or industrial practitioners. They must not have a personal connection with either CPSE Labs itself or the experiment proposers, and will be required to declare that they have no conflicts of interest before evaluating experiment proposals and sign a declaration of confidentiality.

Evaluators will be recognized experts in cyber-physical systems with experience of reviewing funding proposals. However, when writing your experiment proposal, you should assume that not all evaluators reading your proposal will have a detailed knowledge of your own specialized domain. Technical concepts specific to your domain should be explained.

What are the evaluation criteria for experiment proposals?

Experiment proposals will be evaluated with respect to three categories:

- Excellence: scientific and/or technological excellence (relevant to the topics addressed by the call)

- Impact: potential impact through the development, dissemination and use of project results

- Implementation: quality and efficiency of the implementation and the management

- Impact is very important for CPSE Labs experiment proposals. In particular, experiment proposals will be required to:

- Build on one of the key enabling technologies (e.g. platform, tool chain, architecture) supported by the design centers.

- Establish a user-supplier collaboration for realizing clearly specified innovation objectives.

- Address a clearly specified user and market need.

- Facilitate user-supplier partnerships across value-chains and regions.

- Have a well-defined positioning and added-value (appropriate for the type of experiment).

How are experiment proposals evaluated?

The independent evaluators will allocate three scores to each experiment proposal, as follows:

- A mark 0-5 is awarded for excellence

- A mark 0-5 is awarded for implementation

- A mark 0-10 is awarded for impact

The overall maximum score for an experiment proposal is 20 (note that impact therefore has a double weighting). Each proposal will be separately scored by multiple independent evaluators.

For a proposal to be considered further, the score must meet a minimum threshold, which is 3 out of 5 for both excellence and implementation, and a minimum of 6 out of 10 for impact. The individual scores have the following interpretation:

- 0 - Fail. The proposal fails to address the criterion under examination or cannot be judged due to missing or incomplete information.

- 1 - Poor. The criterion is addressed in an inadequate manner, or there are serious inherent weaknesses.

- 2 - Fair. While the proposal broadly addresses the criterion, there are significant weaknesses.

- 3 - Good. The proposal addresses the criterion well, although improvements would be necessary.

- 4 - Very good. The proposal addresses the criterion very well, although certain improvements are still possible.

- 5 - Excellent. The proposal successfully addresses all relevant aspects of the criterion in question. Any shortcomings are minor.

In particular, inadequate justification of costs and resources, as judged by the expert evaluators, will result in a below-threshold score in the Implementation category.

The experiment proposals will be ranked based on the scores produced by the independent evaluators, and the best will be selected for funding based on the ranking.

How many experiment proposals will be selected for funding?

The number of proposals which will receive funding depends on the requested funds and the budget available for this call for experiments. Available budgets are stated in the specific call for proposals.

What is an innovation objective?

Innovation objectives are important for the identifying and describing the impact of your experiment proposal. These will be clearly-stated objectives which are aimed at improving the innovation capabilities of your business; your experiment proposal should explain how they do this. Innovation objectives should be explicitly stated and, as far as possible, measureable. Examples of such objectives could include:

- Increasing the Technology Readiness Level (TRL) of a technology (state how many levels' increase you intend to achieve through your experiment, and what you are using as a baseline)

- Reducing development time/effort/operation costs etc. (e.g. - state what % reduction you intend to achieve, and what data you are using as a baseline)

Note that these are examples only - other well-thought through innovation objectives are also welcomed.

What is a Technology Readiness Level (TRL)?

Technology Readiness Levels (TRLs) are a scale used for assessing the relative maturity of a new technology, usually beginning with initial concepts and research ideas, and ending with a mature technology that has been demonstrated in a production environment, or is ready for commercial exploitation. There are many TRL definitions and scales available; visit our website for links to the EU's preferred definitions, and contact our service centre if you need some guidance on TRLs.

When will I find out whether the experiment proposal was successful?

We will contact you seven weeks after submitting the proposal to inform you of the outcome.

When will I receive funding for the experiment if my experiment proposal is successful?

Experiments which are selected for funding will receive a payment from the CPSE Labs Coordinator at the beginning of the experiment. This pre-financing will cover the 20% of the total experiment costs.

Further payments will be made upon successful completion of milestones and/or deliverables as agreed in the Contract (this could include deliverables, reports and financial documents) as the experiment progresses. Generally, we expect that the amount of payment will be 50% at midterm and 100% at the end of the Project.

What is a CPSE labs contract?

The Contract is the legal contract between your organisation (all organisations, if you have formed an experiment consortium) and your host design centre. It will detail the obligations on both sides in terms of reporting requirements and funding. If your proposal is selected for funding, the Contract will be agreed before the experiment commences.

What is an implementation plan?

The Implementation Plan details the planned experiment and reporting obligations, and will be agreed between your organization (all organisations, if you have formed an experiment consortium) and your host design centre. It will be closely based on the plans you submitted in your experiment proposal. If your proposal is selected for funding, the Implementation Plan will be agreed before the experiment commences.

How soon must the experiment start after I am notified that the proposal was successful?

We anticipate that experiments will be able to start within 2 months after the notification.

What are the reporting obligations for experiments?

Reporting obligations are not intended to be onerous. It's anticipated that experimenters will report to their host design centre on the progress they have made once every three months during the experiment's lifetime.

There will be reviews during the experiment (mid-term review) and after the end of the experiment (final review) before remaining funds are released.

Who will conduct the final review?

The final review will be conducted by the host design centre and additional staff from other CPSE Labs design centres.

What is the purpose of the final review?

The purposes of the final review are:

- To satisfy CPSE Labs, as the funder of the experiment, that work has been carried out and costs incurred as was agreed

- To allow CPSE Labs to understand the impact that has been achieved, or is likely to be achieved, as a result of the work conducted in the experiment. CPSE Labs has its own responsibilities to track the impact of the CPSE Labs project.

Who will own intellectual property (IP) generated as a result of the experiment?

Results from industrial experiments are owned by the parties that generate them. We anticipate that results of experiments are likely to be jointly generated by the experimenter(s) and their host design centre, and so in this case the IP will be shared by both. The Contract (which will be agreed between the host design centre and experimenters before the experiment starts) will specify details.

We recommend that consortia discuss issues of IP ownership between consortium members when establishing a consortium agreement.

Are there any special ethical considerations for my experiment?

The experiment proposal template includes a short section about ethics which must be completed. If there are any special ethical considerations revealed by any of these questions, you will be required to submit additional text describing how you plan to tackle this. Please contact the service centre if you have questions about ethical issues in experiments.

We recommend checking the ethics section in the proposal template in advance to identify whether you need to make special considerations for the ethics of your proposed experiment.

Where do I find further information?

CONTACT DETAILS

Contact our service centre on service@cpse-labs.eu with queries about any part of our processes.

Website and online materials

Our website www.cpse-labs.eu includes important information, including links to lists of EU and associated countries, links to EU definitions for Technology Readiness Levels and Small and Medium Enterprises as well as guidelines for proposers and information and contact details for our six design centres.

Smart Anything Everywhere

CPSE Labs is part of the European Union funded Smart Anything Everywhere initiative. Find out more information about Smart Anything Everywhere at https://smartanythingeverywhere.eu.

Current Calls

Current calls for experiment proposals – when applicable - are always available on our website.

12 Acceptance/rejection letters

These documents will be sent via e-mail to the proposers via e-mail.

The contents of the e-mail will depend on whether the proposal was selected or not.

Subject of the e-mail will be:
CPSE Labs Experiment Proposal XXXXX: Title

All the proposers will receive an attached PDF file (format also included), with the results of the consensus report (never the evaluators' names) and the comments from the Project Officer, if any.

12.1 Document

Dear [Mr./Mz./Dr. XXX]

Thank you for your interest in CPSE Labs, and for the investment of your time and effort in preparing the above proposal. Unfortunately, your proposal has not been selected for funding under the call.

[NOT IN 3RD CALL, ONLY IF CPSE LABS TEAM DECIDES TO INCLUDE] We invite you to submit a new proposal for the next open call, following the instructions that you will find in our website when the period opens.

Feel free to contact CPSE Labs Project Coordinator Dr. Holger Pfeifer at pfeifer@fortiss.org if you have any questions about these results.

We in the CPSE Labs team wish you best in your future endeavours.

Sincerely,

[Individual signature & responsibility in CPSE Labs: e.g. "Holger Pfeifer, Project Coordinator"]

Dear [Mr./Mz./Dr. XXX]

Thank you for your interest in CPSE Labs, and for the investment of your time and effort in preparing the above proposal. I am pleased to notify you that your proposal [proposal name or "for"+ experiment & topic] has been selected for funding.

We will ask you to take account of the evaluation comments in setting up and running the experiment. The CPSE Labs [Spanish/French/Germany North/...] Design Centre will contact you in [reasonable period: "the next two weeks"] to arrange the next steps, including contractual and date issues.

Feel free to contact CPSE Labs Project Coordinator Dr. Holger Pfeifer at pfeifer@fortiss.org if you have any questions about these results.

Sincerely,

[Individual signature & responsibility in CPSE Labs: e.g. "Holger Pfeifer, Project Coordinator"]

On the proposal titled: [title]

The results of the evaluation of your proposal are as follows:

1. Excellence (Weight 1; Threshold 3/5)	[score]
	[text]
2. Impact (Weight 2; Threshold 3/5)	[score]
	[text]
3. Quality and efficiency of the implementation (Weight 1; Threshold 3/5)	[score]
	[text]
Overall Comments:	[comments]

[if needed] Project officer comments: [text]

13 Conclusion

The current document has included, as expected, the guidelines and templates necessary for the Open Call Process. It has also served to describe the Open Call Process.

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[i] literal description of D3.1 per the Innovation Action of the project, page 16

[ii] Project Proposal Part B, page 8 of 82

[iii] Grants Manual - Section on: Proposal submission and evaluation (sections III.5, III.6, IV.1, IV.2, IV.3, IV.5) Version 1.2, January 15th 2015