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FFplus_Call-1-Type-1 Announcement & Proposer's Guide Version: 11/06/2024

Fortissimo Plus, EuroHPC Project 101163317, <https://www.ffplus-project.eu/>

Call for Proposals for Business Experiments addressing the uptake of HPC by SMEs

Identifier: FFplus_Call-1-Type-1

Call Title: First call for business experiments addressing the uptake of HPC by SMEs

Project name and grant agreement number: Fortissimo Plus, 101163317

Project Acronym: FFplus

Deadline: September 4th, 2024 at 17:00 Brussels local time

Expected duration of business experiments: 15 months, with targeted commencement January 1st, 2025

The indicative total funding budget for all sub-projects funded under this call is € 4M.

Funding and eligibility: A number of funding constraints and eligibility conditions apply, detailed in the full announcement text, which include in particular

- The maximum funding request per proposal is € 200,000 (covering all participants).
- A main participant is an SME or start-up new to the use of HPC whose business challenge is addressed in the proposed experiment. Main participants may participate in only one experiment. Supporting participants are organisations supporting the main participant(s) to complete the foreseen activities; such supporting participants may receive a maximum of € 150,000 over all experiments in which they participate.
- FFplus beneficiaries are ineligible to participate as either main or supporting participants.
- Only organisations with head offices based in an EU Member State or in associated countries that are eligible to receive funding from the Digital Europe Programme are eligible to receive funding. Natural persons (individuals) are not eligible to receive funding.

Submission language: English

Internet address for full open call information and proposal submission:

<https://www.ffplus-project.eu/open-call/business-experiments/>

E-mail: ffplus-call-t1@scapos-tools.de



FFplus Introduction

FFplus is funded by the EuroHPC Joint Undertaking (EuroHPC JU) action DIGITAL-EUROHPC-JU-2023-SME-01 "Supporting the competitiveness and innovation potential of SMEs". The central objective of the action is to empower SMEs with advanced computational capabilities based on HPC, enabling them to drive innovation, enhance competitiveness, and overcome challenges in the digitisation of R&D and business processes.

Consequently, the work carried out under FFplus will lead to innovative business experiments and innovation studies that will showcase the benefits of adopting HPC for SMEs and Start-ups throughout Europe.

Business experiments will highlight the value of HPC adoption for SMEs across Europe. Whilst High-Performance Computing (HPC) and a range of associated fields of study and technologies, from numerical simulation to Artificial Intelligence (AI), are increasingly becoming versatile, widely deployed tools for both academia and large industrial organizations, there is still action needed to ensure the uptake of these novel technologies by Small and Medium-sized Enterprises (SMEs) that lack the required expertise. Innovation studies, in contrast, will support European SMEs and Start-ups already active in the field of generative AI technology, which lack the necessary computational resources to scale up.

In particular, the FFplus project will use open-calls for proposals to select business experiments and innovation studies (also referred to as sub-projects) that will be funded through the mechanism of Financial Support for Third Parties (FSTP). Over the duration of the project, FFplus will provide over € 24 million to such sub-projects selected through a total of six open calls: three of which will target small and medium-sized enterprises (SMEs) using high-performance computing (HPC) to improve their business (business experiments), and three of which will target SMEs/Start-ups in the field of generative artificial intelligence (innovation studies).

FFplus_Call-1_Type-1 Objectives

This announcement is the first call for proposals to address the uptake of HPC by SMEs in order to solve specific business challenges of SMEs that have had no prior use of, or experience with, HPC services. The resulting sub-projects will perform "business experiments" (also referred to below just as experiments) that should demonstrate to the broader European SME ecosystem that HPC uptake solves business challenges and leads to positive business impact (including but not limited to increased innovation potential and competitiveness) through the use and deployment of HPC-based computational methods (modelling and simulation, data analytics, AI, etc.). Thus, their key outputs are success stories that promote, communicate, and disseminate the business impact of HPC uptake to the SME ecosystem. The development of the innovation potential of the participating SMEs is also directly targeted.

The call targets highest quality experiments involving innovative, agile SMEs and with work plans built around innovation targets arising from the use of advanced HPC services. Proposals are sought that address business challenges from European SMEs from varied application domains, whereby SMEs whose adoption of advanced HPC services will create the highest business impact will be prioritized. SMEs with an academic focus, for example with business models around R&D services based on HPC



software, or activities with a potential impact only in the long term, such as fundamental research, are not within the scope of the call.

FFplus seeks to promote a widening of the HPC user base amongst European SMEs and thus targets a broad geographical distribution of participants. SMEs based in countries with a previously low level of HPC adoption are encouraged to submit a proposal and may expect to be assisted by their national HPC Competence Centre¹.

This FFplus call is complementary to the open call for proposals for the Development of Generative AI Models (Identifier FFplus_Call-1-Type-2) that is executed in parallel. It should be noted that SMEs² may only participate in one of the two types of sub-projects; i.e. participation is mutually exclusive.

Expectations for the experiments and for proposals

The proposed experiments are expected to:

1. Be fully aligned with the FFplus call objectives defined above.
2. Define the business challenge that needs to be addressed, justifying why this is a challenge and why HPC is needed to address it.
3. Present a vision of success, i.e. how addressing the business challenge using HPC will lead to positive business impact. If applicable, define the value propositions and the process of value creation.
4. Define specific objectives that must be achieved in order to successfully address the business challenge and the accompanying action plan. Furthermore, if necessary, involve the necessary parties required for the effective and efficient execution of the experiment and the demonstration of the impact on SME business challenges through the use of HPC systems or advanced HPC services. Appropriate technical management within an experiment is a required component. Key indicators include revenue generated over recent years, and the existence of a customer base beyond the academic realm.
5. Define the resources needed to meet objectives and the associated costs. The former include HPC resources possibly involving computing resources provided (free of charge) directly by the EuroHPC JU, e.g. through their benchmark and development access system, or through national actions. The HPC National Competence Centres may be able to aid with the selection of appropriate resources and the application process. (FFplus will not be in a position to provide computing resources itself).
6. Declare any data protection issues that might impact its proposed work plan, define data/information protection mechanisms addressing these in the framework of European law, and ensure that the operation of the experiment adheres to these.
7. Support the FFplus project in the generation of publishable success stories – including in multi-media form – which discuss how the SME's real-world problems were addressed and clearly identify the business benefits realised or obtained.

¹ <https://www.eurocc-access.eu>

² With the role of main participant – defined under “funding and eligibility criteria”



8. Be complementary to past Fortissimo experiments³, i.e. avoid duplication of specific activities carried out in the prior Fortissimo, Fortissimo 2 and FF4EuroHPC projects.

In the context of the Fortissimo Plus calls, complementarity of experiments is understood to mean activities that address new applications, services, business cases, industrial sectors and market segments and the enhancement of the project's ability to demonstrate the impact of the Fortissimo approach for a broad set of industrial users. Proposals that just extend past experiments are thus not considered to be complementary.

Funding, Eligibility Criteria and Obligations

The total indicative funding budget for Call 1 sub-projects executing business experiments addressing the uptake of HPC by SMEs is € 4 million.

FFplus will make use of the FSTP (Financial Support of Third Parties) funding method for the experiment consortia selected through the open call. For all sub-projects funded under FSTP, an agreement will be concluded between the experiment consortium⁴ and the FFplus Coordinator; provisions for avoidance of conflicts of interest between sub-projects will be anchored in that agreement. Before conclusion of the funding agreements, the SME will be required to document their status as SME in line with European Commission definitions.

Third Parties will receive 100% funding of incurred, eligible direct costs necessary for the completion of experiment activities; no indirect costs or overheads will be funded. The FFplus project receives funding based on a Grant Agreement following the regulations of the Digital Europe Programme and the eligibility rules of that Grant Agreement will apply for the direct costs arising in the sub-projects.

Consortia selected for funding via the proposal evaluation process will be invited to conclude a funding agreement with the FFplus project coordinator, the University of Stuttgart. That funding agreement will define the payment schedule, whereby payment will be made in multiple tranches, partly linked to the delivery of reports and outputs defined in the experiment workplan and in the funding agreement itself. The principle followed will be that the experiment participants will receive an advance payment at the start of the experiment followed by subsequent instalments.

The following funding conditions and eligibility criteria for participation apply:

- Only organisations with head offices based in an EU Member State or in associated countries that are eligible to receive funding from the Digital Europe Programme are eligible to receive funding. Natural persons (individuals) are not eligible to receive funding.
- The experiments should address the business challenges of an SME new to the use of HPC and that SME may participate in only one experiment.
- A main participant is an SME or a startup and supporting participants are organisations supporting the main participant to complete activities foreseen for the experiment.

³ <https://www.ff4eurohpc.eu/en/success-stories/>

⁴ Note that sole-member consortia are eligible to apply as well.



- Applications are to be submitted by one or more main participants sharing a business case/challenge and optionally (if well justified) one or more supporting participants. Each consortium⁴ partner needs to have a clearly defined role.
- The maximum duration of the experiments is 15 months, with a maximum funding budget of 200 K€. The maximum funding per organisation (in the case of supporting participants, over all experiments in which they participate) is 150 K€.
- SME participation in the FFplus innovation studies for generative AI development and in the business experiments covered by this open call are mutually exclusive. That is, for the SMEs whose business challenge defines the business experiment or innovation study, funding may only be provided for one type of action (Type 1 or Type 2 sub-project). This will be considered during the evaluation and selection process.
- The total number of consortium partners (main participant and supporting participants) is limited to five (5).
- FFplus beneficiaries are ineligible to participate as either main or supporting participants.
- In principle, the major part of the funding applied for should be allocated to the main participants. Any deviations from this principle must be duly justified.
- For supporting participants, only engineering activities are eligible for funding. Activities such as business consultancy, marketing initiatives, administrative tasks, and other non-engineering activities are not eligible for funding.

The budget modules available for experiments are listed in the table below.

Budget module	Additional details
Personnel	Personnel costs need to be commensurate with the work to be performed
Equipment	Depreciation costs only. Only specialized equipment necessary for conducting the experiment is permitted. Costs for common-use equipment such as laptops, monitors, etc., are not eligible.
Travel	Travel must be justified in terms of the necessity for performance of the proposed experiment work plan.
HPC compute capacity	Compute Resources need to be justified. Ideally, EuroHPC systems will be used for the work. A decision not to apply for access to the EuroHPC systems should be duly justified.
Material	1. Costs for acquiring specialized SW licenses for conducting the experiment (licenses for general office software, for example, are not eligible). 2. Costs for acquiring or using data sets or collections needed to conduct the experiment.

The experiments will receive support from the project with a range of actions relating to interactions with the project and also relating to potential collaborations with other sub-projects. Furthermore, direct support for each individual experiment will be provided relating to gaining access to EuroHPC JU-provided computing resources and technical consultation relating to the effective execution of the experiment work plan.



Submission Details

Submission Deadline

All submissions must be made by 17:00 Brussels local time on September 4th 2024.

Electronic Submission

Proposal submission is exclusively in electronic form using the proposal submission tool accessible via the Fortissimo web-site:

<https://www.ffplus-project.eu/open-call/business-experiments/>

The central component of proposal submission is the uploading of two PDF-documents (whose individual size must not exceed 5.0 MB) compliant with the instructions on proposal structure given below.

Indicative Timetable

The target is for the new experiments to commence at the beginning of January 2025. We expect to be able to communicate the results of the evaluation of proposals by early December 2024.

Proposal format and structure

Proposals must be submitted in English. Each proposal must comprise 2 parts: Part A (containing administrative information), Part B (containing the body of the proposal, the structure of which is explained below).

Part A of the proposal contains a cover page and a set of tables to provide administrative data, including a tabular list of proposal participants. The participant list should include for each participant, if available, the Participant Identification Code (PIC) issued by the European Commission⁵. and valid address, telephone/telefax and email contact data.

Only requested information should be included in Part A. Addition of extraneous information such as letters of support etc will result in the proposal being rejected without further evaluation.

The main section of the proposal – Part B - must not exceed 10 pages in length (including any appendices, but excluding the Part B cover page). The Part B text should be no smaller than 11-point Arial font. **Proposals submitted with a Part B whose length (excluding the cover page) exceeds the 10-page limit will be rejected without further evaluation.**

ALL PROPOSERS MUST TAKE CAREFUL NOTE OF THE ABOVE RULES.

⁵ To obtain a PIC, register at <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/how-to-participate/participant-register> . Please note that having a PIC is not a requirement of the call.



The structure of the proposal Part B (and indicative length per section) should be as follows:

1. Summary (0.5 pages)
2. Industrial relevance, potential impact (including societal impact) and exploitation plans (3.5 pages)
3. Description of the work plan and concept (3 pages)
4. Quality of the consortium⁴ as a whole and of the individual proposers (2 pages)
5. Justification of costs and resources (1 page)

A management structure will be established for the successful proposals. That is, the proposal will not need to contain a description of how the management of the experiment in the framework of the overall FFplus project will be achieved, but should include tasks for the technical management of the experiment activities.

Proposal templates for both Part A and Part B can be found at <https://www.ffplus-project.eu/open-call/business-experiments/>

It is a requirement that these templates be followed and in particular that the proposal budget be provided using the embedded Excel spread-sheets.

Evaluation Criteria

The criteria for evaluation will comprise:

1. Impact: industrial relevance (including potentially societal relevance), exploitation plans and alignment with the objectives of the call.
2. Excellence: Soundness of concept, innovation, and quality of the work plan.
3. Quality of the consortium⁴: as a whole and of the individual proposers including their ability to carry out the proposed work.
4. Resources: Effective and justified deployment of resources.

Criteria 1 to 4 will carry a score ranging from 0 to 5. Criterion 1 will have a weight of 2x, Criteria 2 to 4 a weight of 1x (leading to a maximum score of 25 points). A threshold score of 3 will apply to the first three criteria. In case of a tie in the overall score ranking, proposals are ranked based on the individual criteria scoring applying the following priority: Impact, Excellence, Quality of the Consortium, Resources, and finally total requested funding.

The evaluation of proposals will be done by independent, external experts using a consensus review process; which process will be supported by the FFplus beneficiaries coordinating the open call. Each proposal will be assigned two external experts with demonstrated competency in the field of the experiment proposal, that will, independently of one another, produce individual assessment reports. In a consensus session, a moderator works with the two individual evaluators to create a consensus assessment report, representing the consensus position of both experts. The consensus report is turned into an evaluation summary report that will be shared with the proposing consortium.



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The individual assessment reports, consensus reports and evaluation summary reports are structured conform with the evaluation criteria listed above.

Adherence to the proposal format and structure described previously – and notably to the prescribed page limit – will allow the independent external evaluators to evaluate the proposal against all of the above-mentioned evaluation criteria. As explained earlier in this document, failure to adhere to the funding and eligibility restrictions and to the proposal format instructions will lead to immediate rejection of the proposal. The proposers will be provided with the results of the evaluation in the form of an evaluation summary report comprising the consolidated findings of the independent expert evaluators and a decision from the project on the result of the selection procedure. That decision is final and the project will not enter into discussions concerning the evaluation results, and no appeals process will be provided.