FF4EuroHPC
Enabling SMEs to benefit from HPC

OPEN CALL-2

Tomi Ilijaš, Arctur
The FF4EuroHPC project

FF4HPC: HPC Innovation for European SMEs

- Funded under the H2020-JTI-EuroHPC-2019-2 Call
- Commenced 1.9.2020; 36 months duration

- Coordinator

- Other Partners

www.ff4eurohpc.eu
Stimulating the innovation potential of SMEs

The FF4EuroHPC project aims to

→ Increase the innovation potential of industry, and in particular of SMEs, using advanced High Performance Computing (HPC) infrastructures, applications and services.

→ Provide access to HPC-based infrastructures and services to a wide range of users for new and emerging data and compute-intensive applications and services.

→ Foster wider innovations, for example by exchanging and promoting best practice use cases or application experiences.

→ Provide an effective mechanism for inclusion of innovative, agile SMEs lowering the barriers for small actors to enter the market and exploit new business opportunities.
Why use HPC in business?

**BENEFITS OF HPC**

(SOURCE: COUNCIL OF COMPETITIVENESS)

- Inability to solve the problem by any other means: 23%
- Time to solution: 24%
- Utilization rate: 8%
- Improvement in quality or features: 9%
- Reduced costs compared to physical methods: 16%
- ROI: 19%
- Other: 1%
Shift your business to the next level with the help of HPC – OPEN CALL

→ Call for proposals targets highest quality experiments involving innovative, agile SMEs. and with work plans built around innovation targets arising from the use of advanced HPC services.

→ The FF4EuroHPC mission is to support EuroHPC to promote industrial uptake of HPC technology and increase the innovation potential.
Response to FF4EuroHPC Call-1

→ 68 proposals were received involving 202 organisations and participants from 25 European countries

→ Wide range of application areas
16 proposals selected for funding, with a funding budget just in excess of €3M

Involving 53 organisations, 27 of which being SMEs

Strong SME participation and range of themes addressed
Are There Differences Between Call-1 and Call-2?

YES.

The key changes affect the selection process and have been introduced to:

(i) give a higher priority to experiments addressing the business benefits of manufacturing SMEs;

(ii) achieve a broad geographical distribution of participants.
OPEN CALL-2 objectives

→ Experiments should address business challenges from European SMEs from varied application domains
  • The highest priority is given to proposals directly addressing the business challenges of manufacturing SMEs
  • Preference being given to engineering and manufacturing, or sectors able to demonstrate fast economic growth or particular economic impact for Europe.
  • Research-focused business models are not within the scope of the Call

→ Priority will be given to consortia centred on SMEs that are new to the use of advanced HPC services
Expectations for experiments

→ Involve all necessary parties required for the effective and efficient execution of the investigation and impact demonstration to address SME business challenges through the use of HPC

→ Define the resources they need and budget for them

FF4EuroHPC will not be in a position to provide computing resources.

→ Define the data protection and data/information access issues that impact its proposed work plan and ensure that the operation of the experiment adheres to those requirements.

→ Generate publishable success stories based on solution of the SME’s real-world problems that clearly identify the business benefits realised or obtained.

→ Align, where appropriate, with regional priorities, such as industrial specialisation areas.

→ Be complementary to those already included in the past Fortissimo and Fortissimo 2 projects.
Key Call Details

- Submission Deadline: **29th September 2021, 17:00**
  Brussels local time
- Funding for Call-2: The indicative total funding budget is **EUR 5 Mio.**
- Expected duration of experiments: **maximum 15 months** with expected commencement 1\(^{st}\) March 2022
- Maximum funding request per proposal: **EUR 200,000** (covering all participants)
- Proposal submission: in **electronic form**
- Language: **English**
- Submission site: [https://www.ff4eurohpc.eu/calls/submission](https://www.ff4eurohpc.eu/calls/submission)
The criteria for evaluation will comprise:

1. Impact including industrial relevance and exploitation plans;
2. Soundness of concept, innovation and quality of the work plan;
3. Quality of the consortium as a whole and of the individual proposers;
4. Effective and justified deployment of resources

For Criteria 1 to 4, each criterion 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.

Experiments involving manufacturing SMEs, the maximum score on Criterion 1 that will be assigned to a proposal not directly addressing the business challenges of manufacturing SMEs will be 4.0 points.
Key Call Details

Proposals must comprise 2 parts:

→ **Part A (administrative information)**
  Cover page and a set of tables to provide administrative data – no additional info to be included!

→ **Part B (body of the proposal)**
  Cover page + max. 10 pages

Proposals not adhering to the page limit & content guidelines will be rejected!
Two-phase process - specific intent to increase the geographic distribution of FF4EuroHPC experiments

FF4EuroHCP Call-1 selected proposals involving organisations from the following 9 countries: Croatia, France, Germany, Greece, Italy, Montenegro, Serbia, Spain, and the United Kingdom.

Phase 1:
- A selection of experiments with a cumulative funding of up to €3 M
- Selection from will be made from those proposals with a score exceeding 17 points and taking, for each country not in the aforementioned list, the highest ranked proposal involving an organisation from that country (if any).

Phase 2 will use the ranking of all remaining proposals irrespective of country affiliations to select the remaining experiments for funding with the budget not used in the first phase.
Selection of Experiments for Funding

1. **Evaluation Process**
   - Rate all proposals

2. **Proposals above threshold**
   - Rank proposals for each Phase 1 country with score > 17 points
     - Best proposal for each Phase 1 country
     - Selected for funding

3. **Proposals not selected**
   - Rank proposals for all countries
     - Best n proposals within the remaining budget
     - Selected for funding

4. **Sub-threshold proposals**
   - Not eligible for funding

Phase 1 selections using $x < 3\, M\epsilon$

Phase 2 selections using $(5 - x)\, M\epsilon$
Funding of Experiments

→ FF4EuroHPC will make use of the Financial Support for Third Parties method to enable the inclusion of new experiment partners.
  • Funding of Third Parties to follow the same principles as used for FF4EuroHPC beneficiaries, which receives European Commission funding within the R&D&I programme of the EuroHPC Joint Undertaking. In particular, Third Parties will receive 100% funding of eligible costs arising.

→ The funding for an individual experiment may not exceed 200 K€ (covering all participants).

→ The maximum funding that can be allocated to any Third Party, across all FF4EuroHPC experiments in which that Third Party is involved, is 150 K€.

→ The participation of certain FF4EuroHPC beneficiaries in experiments is eligible, but the costs for their activities in experiments are not included within the requested funding for experiments.

• Note: Proposals to FF4EuroHPC Call-2 that do not adhere to the abovementioned funding restrictions will be rejected without further evaluation
Have more questions?

Find the answers in FAQ →

https://www.ff4eurohpc.eu/calls/faq/
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2 Fortissimo projects → 92 SMEs → more than 90 experiments → 79 success stories

All success stories could be found on the project website: www.ff4eurohpc.eu/en/success-stories/

• SUCCESS STORY EXAMPLE 1

Zyba: Cloud-based optimisation of a multi-body wave energy device

• The Challenge
• The Solution
• Benefits
  • Reduced simulation set up time from 2 hours to less than 1 minute.
  • Mitigated use of physical modelling, providing a ninefold reduction in cost.
  • Reduced HPC costs from 0.09€/core-hour to 0.05€/core-hour as all software used was open source.
  • Ability to concurrently run simulations improved productivity by a factor of 7
Thank you

This project has received funding from the European High-Performance Computing Joint Undertaking Joint Undertaking (JU) under grant agreement No 951745. The JU receives support from the European Union’s Horizon 2020 research and innovation programme and Germany, Italy, Slovenia, France, Spain.