**Project Detailed Description** (Version 13.0)

|  |  |
| --- | --- |
| **Project name** |  |
| **Research field** |  |

**Project leader**

|  |  |
| --- | --- |
| **Title** |  |
| **Last name** |  |
| **First name** |  |
| **Organisation name\*** |  |
| **Department \*** |  |
| **Group\*** |  |
| **Country** |  |

\* *Example*

*- University of Amsterdam, Facebook*

*- Department of Physics, Advertising*

*- Group of Molecular Physics , Data Analytics*

Please upload a single document, using this template, in **PDF** format which is of a size no more than 8 MB and addresses **ALL of the points below**. The minimum font size that you can use is 12 point and you must adhere to the page limits indicated below. The maximum number of pages you may submit, including references, is **8 pages**.

**Abstract**

Please provide abstract of your project here

**1. Describe your project.** Include discussion of the scientific and innovation questions that you are planning to address and the overall goals of the project. It is important that you describe the novelty, impact and timeliness of the proposal. (2 pages)

**2. Describe how you will manage the resources requested?** It is strongly encouraged that you use a Gantt chart or equivalent to illustrate this. (1 page)

**3. Describe your application software** in terms of the numerical methods and algorithms that you are planning to use**,** improve or develop (if applicable); the codes, packages or libraries that you need to undertake the project; and how these will enable the research to be achieved. (1 page)

**4. Explain why this project needs to run on a HPC resource**, why Cyclone is suitable for the project and how the use of the system will enable the science and innovation proposed. You should describe the architecture, machine/system name and the problem sizes that have been used to test for scaling and provide supporting evidence. Please provide a table (such as the one shown below) and scaling plots with example data to illustrate the information requested (2 pages).

**Example speedup table – Please adapt accordingly**

|  |  |  |
| --- | --- | --- |
| **# cores** | **absolute timing (s)** | **speedup**  |
| 256  | 189.6  | 1.0000  |
| 512  | 99.0  | 1.9154  |
| 1024  | 55.6  | 3.4088  |
| 2048  | 30.8  | 6.1376  |

**5. Describe your experience of using HPC resources in the past and how you will manage using the HPC resources you are applying for.** What other experience do you and your team bring to this project? (1 page).

**6. Justify the number of core hours requested.** This should include information such as: run type, wall clock time per step, number of jobs per run type, the number of CPU cores and the total core hours per run type. This information should take the form of a table like the one shown below with example data. Explain how the core hours requested will be used. (1 page).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Run type** | **# Runs** | **# Steps/Run** | **Walltime/Step** | **# CPU cores** | **Total core hours/Type Run**  |
| **1**  | r1  | s1  | w1  | p1  | R1\*s1\*w1\*p1  |
| **2**  | r2  | s2  | w2  | p2  | R2\*s2\*w2\*p2  |
| **3…** | r3  | s3  | w3  | p3  | R3\*s3\*w3\*p3  |
| **…** | … | … | … | … | …  |
| **TOTAL** |  |  |  |  | *GRAND TOTAL*  |