Minutes of the 3rd cPPP HPC Partnership Board meeting

23/04/2015, Brussels, Belgium

Welcome by the Co-Chairs

Thierry van der Pyl (EC) and Jean-François Lavignon (ETP4HPC) welcomed the participants and started the meeting at 09:00. It is agreed to start with the presentation of the FETHPC call results and then continue with the rest of the agenda.

Presentation of results of FET Call 2014 (Panos Tsarchopoulos, EC)

81 eligible proposals were submitted. In the submitted proposals, the most popular areas were "mathematics and algorithms" together with "programming". The area of "APIs and system software" attracted the lowest number of proposals.

Twenty one proposals were retained: 19 Research and Innovation Actions under the FETHPC1 topic (HPC Core Technologies, Programming Environments and Algorithms for Extreme Parallelism and Extreme Data Applications) and 2 Coordination and Support Actions under the FETHPC2 topic (HPC Ecosystem Development). For FETHPC1, the retained proposals cover the core HPC technologies of subtopic 1a (processors, memory, interconnect and storage), the programming methodologies, environments, languages and tools (subtopic 1b) and the new mathematical and algorithmic approaches (subtopic 1d). Subtopic 1c (APIs and system software) is not directly covered. For FETHPC 2, one CSA covers the coordination of the HPC strategy (subtopic 2a) and the other CSA covers excellence in High Performance Computing Systems (subtopic 2b).

The Programme Committee and the proposers were informed about the results end-March 2015. The grant agreements are expected to be finalized by end June 2015. A list of funded projects, abstracts and participants will be made available after the finalization of the grant agreements. All projects are expected to start before the end of 2015.

In the discussion after the presentation the following points are addressed:

- It is clarified that there are 5 retained proposals with main focus "programming" (subtopic 1b) and 5 retained proposals with main focus "mathematics and algorithms" (subtopic 1d); as a result the funding going into each of these areas is similar.
- The absence of coverage for subtopic 1c (APIs and systems software) makes necessary actions to cover this point in the next Calls.
- Further analysis is needed on how many proposals were led by industrials and how many of them succeeded.
- Further analysis is needed on the academia/industry participation in submitted and retained proposals in subtopic d) "mathematics and algorithms".
- It is agreed that no clause to enforce cooperation of projects needs to be included in the grant agreements for the retained proposals. This is not necessary for WP2016-2017 either. There is no need to legally enforce cooperation among projects; this should be done on

voluntary basis. The role of EXDCI, the retained CSA working on the coordination of the HPC strategy, is crucial in providing exchange opportunities among the selected projects.

- The notion of no-negotiation in H2020: the time to grant is strictly set to 8 months and there is only some limited flexibility to change the description of work.
- The evaluation has been observed by independent observers. The EC made sure that there was a balance of evaluators (geographic, gender, background, etc.)

Actions

- In the FETHPC WP16-17 "transition to exascale" area, the EC has introduced a condition that at least one project per subtopic will be funded. ETP4HPC to think of any additional corrective actions for the next WPs (for example, to ensure proper participation of industry, requirements for industrial applications should be appearing in the future calls)
- Information on projects to be funded should be shared as soon as possible after the grant agreement finalization.
- The EC will further analyze 1) how many proposals were led by industrials and how many of them succeeded; and 2) the academia/industry participation in submitted and retained proposals in subtopic 1d.

Status of Preparation of WP2016-2017

The FET WP2016-2017 is currently being discussed with the Programme Committee. Inputs from the ETP4HPC were received and taken into account. Due to budgetary constraints the current planning is to have 2 HPC calls in FET in 2016/2017: bigger co-design projects call in 2016 and transition to exascale with HPC ecosystem development in 2017. There are strict budgetary constraints taken into account for this planning, therefore, it is very difficult to have changes unless stakeholders are facing a real problem.

Presentation of results of CoE Call 2014 (Aniyan Varghese, EC)

The results of the Call have not yet been sent to the committee; this will happen in May. There are 23 submitted proposals, 3 were out of scope, therefore only 20 were evaluated and competed for an EC funding of 40m€. The areas covered are: Energy (Renewable energy, new energy sources), Materials modelling and design, Molecular and atomic modelling, Physics (Spintronics, particle physics), Weather and climate modelling, Performance Optimization, Global systems & Digital humanities, Engineering (Simulation), Biomolecular (life science) – biomedicine and personalised medicine, Environmental (blue marine, ground water, natural disaster) and Algorithms. The average requested funding per proposal was 4.55m€ with a range between 4.07-5.8m€, meaning that some proposals didn't respect the indicated funding range in the call text. Around 8-10 proposals will be funded; statistics will become available later.

Presentation of the ESD concept (Michael Malms, ETP4HPC)

The concept of Extreme Scale Demonstrators (ESD) was explained. The focus is to give proof points for readiness, usability and scalability potential of technologies of WP14/15- WP16/17. Three to four

ESD projects are foreseen. Phase A (18-24 months) includes R&D + parts with a budget of 20-30m€. Phase B (24 months) includes costs of utilities, operations and maintenance. The target design point is 200pflops. The WP14/15- WP16/17 must provide a sound technology basis for building ESDs. The support action EXDCI can be used to foster communication between the projects.

Presentation of the technology evolution (Jean-François Lavignon, ETP4HPC)

The presentation covered the evolution of technology in CMOS/memory/photonics. On the evolution of the technology in relation to the evolution of the applications, it is noted that although there are interplays due to market pull from bigger application areas, technology can be seen as evolving independently from the applications; it is then a matter of configuration e.g. I/O gateways and controllers can be used to adapt to the specific applications. There are overlaps and synergies in big data, the cloud and HPC. The Fortissimo project is an example of providing SMEs with cloud access to HPC.

Reporting on PPPs and methodology for KPIs (Jean-Philippe Nominé, ETP4HPC)

The status of preparation of the different sections of the report was presented. It is confirmed that Thierry van der Pyl and Jean-François Lavignon will write the forewords. The reporting is a common exercise for all cPPPs that is coordinated by DG RTD. The report is important for making the case for the importance of cPPPs and it will be taken into account for the mid-term review of cPPPs.

Actions:

- The EC to coordinate the forewords.
- The EC to provide the precise timing for the mid-term review for the HPC cPPP.

International Cooperation (Jean-François Lavignon, ETP4HPC)

International cooperation can go along 2 axes. On the first axis, it is important to exchange information about projects with US and Japan. An agreement would be thus needed in the level of EC and the administrations of US and Japan. ETP4HPC can assist in identifying the proper contacts from US/Japan. The EC should target to establish a Memorandum of Understanding (MoU) if there interest from the other parties. A MoU on HPC between US and Japan already exists. On the second axis cooperation could be sought with emerging countries that want to boost their scientific ecosystem and plan to install HPC infrastructures. Such countries are Brazil, Mexico, South Africa, Algeria and Morocco. There should be an effort to link these countries with CoEs so as to provide them with services.

The EC noted that MoUs may take a long time as they have to be signed at a high level; however there is ongoing cooperation with US/Japan in other areas (including scientific research) so extension of cooperation along the existing agreements could be sought. If there are specific areas in WP2016-2017 where cooperation would be advantageous these should be pointed out as soon as possible as the WP draft is in the final stage of preparation.

Actions:

- ETP4HPC & EC to identify potential areas of international cooperation in the next Calls.
- Further investigate the idea of organizing workshops with specific countries to elaborate the areas of collaboration in HPC.

Communication – Events

Major events include Prace Days (May, Dublin), ISC High Performance (July, Frankfurt) and SC15 (November, Austin TX). Some ETP4HPC partners will participate in SC15, but there will be no ETP4HPC booth. A session will be proposed (deadline July) but the topic has not been yet decided. A booth will be available at the TERATEC 2015 Forum and there will be a proposal for a networking session in ICT 2015 in Lisbon.

It is important to step-up project communications as well as company CEOs meeting/discussing with the CNECT commissioner Mr Oettinger and VP Ansip who is leading the Digital Single Market.

Next Meeting – AOB

Next meeting will take place on 10.11.2015 between 09:00-13:00

Thierry van der Pyl thanked the participants and meeting was closed at 13:00.