**HPC Review – Terms of Reference**

**20th February 2017**

**Background:**

In 2014, the Provost’s Board took the decision to double the College’s annual capital investment in High Performance Computing (HPC) to £2M to provide the hardware infrastructure to meet the range of needs of all its researchers. In particular, the College’s strategic vision is to provide an HPC Service with the capability of a tier 2 regional HPC hub, including a high-end parallel system with 10% of the capability of the national ARCHER service. Alongside the investment in capital equipment, expansion of the HPC support team was identified as a priority.   
  
A condition of the increased funding was that an external review of the HPC Service should be arranged half-way through the funding period, i.e. in early 2017. This has turned out to coincide with the departure of the longstanding HPC Service Manager, Simon Burbidge, and a project to migrate the service from its current location on the South Kensington campus to the Jisc/Virtus shared data centre in Slough.

**Terms of reference:**

Prof Mark Parsons (EPCC Executive Director - Research and Commercialisation) has agreed to provide external expert opinion to college as part of the review.

He will be visiting College on 20th February to meet with selected staff and academics who conduct and support computational research. The interviewees provide a mix of existing users of College HPC facilities, those who user other platforms to perform computational research and those who provide support services. The meeting schedule is shown at the bottom of this document

The review is intended to cover all aspects of Imperials current HPC provision. Questions include but are not limited to:

* To what extent does the current provision meet the needs of researchers from across the College?
* What developments of the service will be necessary to meet future demands, especially from emerging areas of computational research?
* Should the HPC Service be part of a broader “research computing service” provision that includes data-centric computing (data science), research software support and Cloud computing?
* Are the current governance arrangements appropriate for the management of the HPC Service?
* How should the service combine the current model of basic free access with incentives for researchers to seek leverage additional external funding to recover costs (both for hardware, running costs and/or technical support)?
* What information should the service collate to demonstrate excellence in service delivery and scientific output enabled?

Those invited to discuss the service with Prof Mark Parsons are encouraged to be open and candid with their feedback. Feedback should not just be limited to the existing College HPC services but should also consider where central College investment and resources could be used to support Research groups conducting computational research and analytics.

**Review outcomes:**

The review exercise forms part of the College’s continuing commitment to support computational research. The review aims to establish how to maximise the investment in High Performance Computing and is not seeking to curtail central College support and investment.

The review will report to the Vice-Provost for Research and the Chief Information Office of the College. Outcomes of the review exercise will be shared within College and will be used to help determine the profile of the successor to Simon Burbidge – HPC manager.

**Meeting schedule (20th Feb):**

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| Time | Meeting | Department | Comments |
| 09:45-10:30 | Prof Nick Jennings  Prof Peter Haynes | Vice Provost – Research  Materials (HPC Chair) |  |
| 10:30-11:15 | Dr Sarah Butcher  Dr Katharina Hauck | FoM Bioinformatics  Sch of Public Health |  |
| 11:30-12:15 | Prof Alan Armstrong  Prof Henry Rzepa  TBC  Prof Nigel Brandon | Chemistry  Chemistry  Computing (DSI)  Engineering (Vice Dean) | Until 12:00pm  TBC  TBC |
| 12:30-13:15 | Prof Mike Bearpark  Dr Gerard Gorman | Chemistry (HPC user group chair)  Earth Sciences (HPC technical group chair) | Lunch included |
| 13:30-14:00 | Simon Burbidge  Matt Harvey | HPC Manager |  |
| 14:00-14:45 | Dr Peter Vincent  Dr David Ham  Prof David Colling | Aeronautics  Mathematics  Physics |  |
| 15:00-15:40 | Mike Russell  Richard Favell | ICT (CIO)  ICT Service Line Manager |  |
| 15:45-16:30 | Dr Jonas Verschueren  Dr Iona Hadade | Materials – Post Doc  Mechanical Eng. (PhD) | TBC |
| 16:45-17:30 | Rob Horton  Miguel Oliveira  Dr Katerina Michalickova | HPC Team |  |
| 18:00 | Wrap up & Next steps  Prof Nick Jennings | Vice Provost - Research |  |